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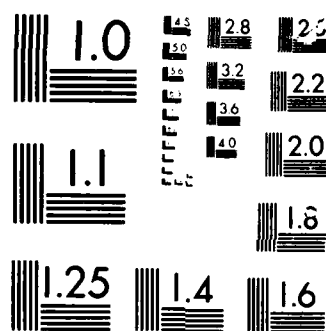
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The Future of Intergovernmental Relations And The U.S. Army Corps of Engineers

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Changing Traditions and Building New Partnerships

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THE FUTURE OF INTERGOVERNMENTAL RELATIONS
AND
THE U.S. ARMY CORPS OF ENGINEERS
Changing Traditions and Building New Partnerships

Prepared by
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This report was written to serve two purposes. First, it was submitted as a Master's thesis in a public policy academic program. Second, the information within is expected to provide input into a number of continuing Policy Studies, covering the new state and Federal roles in water development in light of changed financing arrangements. The author is solely responsible for the accuracy of the information contained herein and the contents in no way should be construed as representing the views of the Federal government or of the U.S. Army Corps of Engineers.

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SUMMARY

One of the distinguishing characteristics of intergovernmental relations as a field is that they are often enmeshed in policy questions concerning financing. This certainly holds true for the new situation expected for the Civil Works Program - a program described by the Corps' leadership as entering a "new partnership". Although the meaning of this term is not yet clear, it signifies a different working paradigm, or a fresh understanding, of the roles various participants play in the national water resources program. Major responsibilities will be shifted from the Federal government, to state and local project sponsors. Flexibility and innovation will be required of project partners because there will be few 'cookbook' solutions. Each district within the Corps will find itself with different challenges depending on the capabilities and institutional constraints faced by potential project sponsors. Parts of this paper will outline those factors and be purely informational, but its primary purpose will be to analyze the new roles and relationships within the water resources community. ~~The~~ conclusions are followed by policy options which are offered to help institutionalize a new water resources planning and development framework.

Chapter I, 'Water Development Policy and the U.S. Army Corps of Engineers', is a quick summary the history of the U.S. Army Corps of Engineers in the country's water development efforts. It discusses the movement over the years toward cost sharing reform in the building of Federal water projects. There is also a short discussion of the political forces that have shifted over the last decade to make the proposed changes possible.

Chapter II, 'Cost Sharing as Agent of Change', builds on the underlying theme of the paper. Just as the environmental movement instigated reforms in methods of project development, so too ~~will~~ increased project cost sharing drive changes in institutional relationships. What the cumulative impacts on current intergovernmental relations will be is open to speculation. At times there are three or more distinct points of view among the three levels of government on what type of project (if any), or project elements, are appropriate to solve particular water problems. Satisfying local governments does not always coincide with satisfying larger state objectives and visa versa. Some of the concerns likely to impact each of the three levels of government are considered in this chapter. The role of private sector financial consultant is also introduced.

The flexibility inherent in the Principles and Guidelines (P&G) can be the basis for altering the

traditional Corps project. The P&G say that projects must be 'acceptable' to local sponsors. At a minimum, this criterion suggests that project sponsors are able to finance the non-Federal share of project costs. However, there is a difference between financial capability and financial acceptability. If a project sponsor is found to be financially capable (or the state steps in with the capability to sponsor any single project) what flexibility is remaining in project formulation (i.e. flexibility based on financial considerations that are not due solely to financial capability)?

In what ways can traditional Corps' projects be made more affordable thus more financeable? For some types of projects, staging developments over a longer period is a good way to increase affordability. For flood control projects, lower levels of protection may be an acceptable risk for some communities. If determining the acceptable risk becomes negotiable, how should its introduction be brought into the decisionmaking process? What other flexibility is available in terms of less costly structural solutions? Under what circumstances should alterations in standard practices or norms be allowed? A consensus among engineers and planners from the Federal and state governments must be sought on these questions. The alternatives must embody a reasonable amount of consistency

between projects in similar environments. However, the more rigid policies and procedures become in order to obtain consistency, the less the flexibility is available to cooperate with fifty different states.

The overlapping-authority model of intergovernmental relations that best describes the U.S. system is characterized by interdependence and bargaining among officials of the three levels of government. Within the overlapping authority to manage water resources, the Civil Works program has been characterized largely by national-local cooperation. The implementation of increased cost sharing will cause the states to become more heavily involved in the sponsorship of Federal projects for three primary reasons. First, most local governments do not have the planning and technical capabilities which are available at the state level. More direct planning responsibility may be shouldered by the sponsors through cost-shared planning (although that will be the sponsor's choice), but even if the Corps remains the primary planner, sponsors will need to understand the project design and components more completely, thus the need for state assistance. Second, states will need to expand their role as guarantor of social equity in water resource development. It may have to redistribute its available resources to those communities least able to pay. (State policies regarding the payment of

a portion of the non-Federal (sponsor) share of a Federal project may need to be updated. Third, and most importantly, state credit ratings and capacity are affected by the debt taken on by their subdivisions. Most states are involved in at least some small way in coordinating or assisting local governments in their debt issuance; a few have strict regulatory programs.

The clear 'bottom line' result of the proposed reforms on intergovernmental relations is the larger and more active state role in decisionmaking. The program will reflect a higher degree of national-state-local cooperation generally, and in many cases may substitute a simple national-state coalition. When differences arise between state priorities and local priorities over project outputs and features, the cumulative impact of higher cost sharing increases the influence of the state at the expense of local preferences.

Chapter III, 'The Nature of the New Federal/State Relationship', presents a framework for planning under a "new partnership". A commitment to a more open planning process came out of efforts to adapt to the challenges posed by the environmental movement of the late sixties and early seventies. The success of this initiative has been mixed, and, while leading to more favorable opinions of the Corps, has not been a panacea for resolving fundamental disagreements. Increasing the financial stake of the

project sponsor could be the missing factor in realizing the largely unattained goals of public involvement.

Furthermore, under an equal partner scenario, many perceptions currently held of the roles in the planning relationship must change. The Corps must increasingly play the part of consultant rather than arbiter of the project planning process; the project sponsor increasingly plays the role of client.

Recognizing that conflicting objectives between the three levels of government and various project sponsors will require negotiated solutions, it is suggested that these be made explicitly. An open, documented process leading to project configuration will be more efficient and effective over the long run. A model called the Negotiated Investment Strategy (NIS) is used as an example of how this can be done. NIS has been used recently to reach agreement on investment decisions between competing governmental authorities under a fixed budget constraint. The Corps' public involvement program is similar in many respects and has been utilized effectively to various degrees, but was not intended to become a negotiation among equals. It has also taken place without real budget constraints.

Chapter IV, 'Cost Sharing the Planning Process', discusses the project planning process under proposed cost shared planning policies. Legislation proposed in both

Houses of Congress will allow in-kind planning services by the project sponsor to be applied to the non-Federal share. In 1982, the General Accounting Office reported on a sample of planning study results. To improve the success rate and save money on bad studies they suggest sharing the study costs with potential project sponsors. The benefits they ascribe to this policy were considered outside of the possibility of increased cost sharing for the projects themselves. Many of the benefits they foresee as a result of planning cost sharing will be gained from changing the way projects are financed. The remaining advantages, which still may be tangible but are harder to quantify, must be weighed against some of the costs of administering such a program and the loss of comprehensive, basin-wide information that may never be developed. In addition, the continuing authorities to plan for small projects should not be subject to the same treatment as major feasibility studies; they are fundamentally different programs.

The administration of a joint planning process presents new challenges. The state position on cost-shared planning, as defined by ICWP, suggests a method by which project sponsors would be responsible for specific aspects of the study's components. What kind of planning input can the Corps expect from states as in-kind services in the cost-shared planning process? The second half of Chapter IV

is a partial answer to this question. Surveys of the professional capabilities of state water resource agencies are presented. The 1981 Water Resource Council findings are discussed and compared to a fifty state survey completed for this study. It is difficult to draw definite conclusions from these surveys. Only fifteen states do not have comprehensive water quality or quantity planning efforts according to the WRC study. But among the fifteen are some that are found to have substantial capabilities in the current survey.

The current survey inquired about the existence and nature of a state water plan. If the state's plan makes project-specific recommendations, it is assumed to have greater technical capabilities or more resources. Eighteen states were found to have state water plans that make project specific recommendations. There are at least five states with medium-to-large state-level professional planning staffs that also have substate regional authorities having substantial planning capabilities of their own. Three of these - California, Texas, and Florida - are states experiencing tremendous population growth and the subsequent demand for increased water supply. Logically, states with the most urgent water demands, and/or the greatest wealth, have developed the most professional capabilities in overall water resource management. However, even states that have

strong capabilities rely on the Federal government as a primary source of technical expertise and large project development. Insights about the various state planning efforts can be gained from Table IV-2.

Chapter V, 'State Institutions; Financing Constraints and Financial Assistance Program', is a review of some of the ways states can affect the financing of public infrastructure. The differences between Federal and state budgets and budget processes are highlighted. Institutional and legal constraints to financing, some flowing from budgeting, are discussed. A fifty state survey of various state debt limitations, referendum requirements, tax limitations, and interest rate ceilings is displayed. On the initiatives side, state governments implement policies toward overcoming financial hurdles, especially for small communities. These financial assistance policies and programs are discussed and current reports and studies are compared. Five categories of financial assistance programs are given and their pros and cons discussed. These categories are 1) Supervision and Technical Assistance, 2) Financial Intermediation (Bond Banks, Revolving loan programs), 3) Grants for Debt Service, 4) Guarantee of Local Debt, and 5) Creative Financing.

CHAPTER I

WATER DEVELOPMENT POLICY AND THE U.S. ARMY CORPS OF ENGINEERS

Background

The U.S. Army Corps of Engineers is the largest Federal government agency responsible for the development of the nation's water resources. Other Federal agencies have important water development and management missions but are limited to more specialized purposes or geographical regions (e.g. Bureau of Reclamation, Soil Conservation Service, Tennessee Valley Authority). The Corps also provides engineering support to other Federal agencies, but its primary civilian responsibilities include the development and maintenance of the country's navigable waterways, ports and harbors, and multipurpose reservoirs that provide flood control, water supply, hydroelectric power, and recreation.

National spending for water resources is determined to be in the Federal interest primarily when a major investment can provide broad regional (multijurisdictional) benefits and classic public goods. Each multipurpose project must evolve out of a planning process where tradeoffs are made between the various project purposes and the geographically distributed user groups. The national economic development

benefits of a project must be greater than its costs. After the project is determined to have a benefit-cost ratio greater than one (net present value benefits), it must then pass several layers of internal review before being authorized and appropriated for by the U.S. Congress.

Because Congress makes the final spending decisions, political forces are brought to bear on project distribution. For this reason, Corps' projects are often cited as examples of 'pork barrel' Federal spending.

In the past, Corps projects have been purchased almost solely with Federal dollars. Local sponsors of Corps projects have traditionally shared in project costs by supplying lands, easements, and rights-of-ways. The average local investment from these sources in existing Corps flood control projects has been between seventeen and eighteen percent; for navigation projects the non-Federal share has been much less. For projects that yield vendible outputs, such as water supply and hydroelectric power, 100% recovery of project costs over the life of the project (50 years) has been the policy. The relatively low non-Federal cost share, generous repayment terms (low effective interest rates), or absence of cost sharing for certain identifiable groups of project beneficiaries, however, has resulted in Federal subsidies that many policymakers believe we can no longer afford.

The United States' policies that served a developing country well have become increasingly suspect in a more developed and mature economy. As the older part of the country is faced with infrastructure decay and the need for rehabilitation, some policymakers began to question the distributional inequities and economic inefficiencies resulting from traditional water development policies. Today the country is nearer to acting on recommendations that have long been made by water policy analysts; that we move toward a system where the identifiable beneficiaries of water investments pay a greater share or all of the costs associated with the investment. In addition, proposed legislation (S. 1567 & H.R. 6) seeks local sponsors' capital while the project is being constructed and changes in the repayment policy. This 'up-front' financing is a new feature for Federal water resource investments.

To apply a consistent nationwide cost sharing percentage for each project purpose was the recommendation of, among other studies, the often cited report Water Policies for the Future (National Water Commission, 1973). The current administration has tried to implement a similar policy but until recently had been unable to secure a political consensus on the cost sharing percentages. (The late-night end to the Ninety-Eighth Congress came when legislators finally succumbed to veto threats brought on by

an omnibus water development bill. The legislation, attached to the appropriations bill (Continuing Resolution) needed to fund practically the entire Federal government, contained cost sharing provisions not strong enough for the administration.) On June 21, 1985 a tentative agreement on cost sharing was made between the Senate leadership and the administration which is the basis for S. 1567, a bill which is likely to be approved by the entire body. The companion House bill (H.R. 6) has been modified to adopt some of the controversial cost sharing provisions of the Senate bill. However hopeful water interests may be concerning passage of this legislation, the history of failed attempts lends no certainty until laws have been enacted.

Beginning with President Carter's "hit list" of 18 Federal water projects, relations between water interests and the most recent administrations have been strained. They have contributed to a policy impasse and virtual halt to major new construction starts. Of the 106 ongoing projects in the Corps of Engineer FY 1985 budget, only six were started after 1979. If the impasse should end, so should the intergovernmental paradigm characterized by Federal dominance and development policies for water resource projects.

The Logic Behind Changing Cost-Sharing Policy

There are several logical arguments for increasing the sponsor's share of water resource projects. Expensive

Federal projects can easily be perceived as a "free good" by the local sponsors, or at least as the lowest cost alternative. The lower the cost of a project to direct beneficiaries, the larger the incentive to overbuild. Left alone, and assuming adequate resources, a community may respond to its water problems by considering less costly alternatives. Therefore, by giving beneficiaries a larger stake in the project, wiser investment decisions are foreseen. Further, for projects with clearly vendible outputs, efficient resource utilization is more likely when users pay the full cost of service including a return to capital. Many taxpayers find it inequitable, especially in times of Federal retrenchment, to subsidize a commodity for some while others pay an unsubsidized price.

The literature is replete with studies finding inefficiencies in U.S. water development policy. The following is a passage from the National Water Commission report (N.W.C, 1973):

Present policies governing Federal and non-Federal cost-sharing arrangements in the water resources field have been established over a long period of time by unrelated congressional actions on particular projects and programs and by similarly uncoordinated administrative determinations. As a result, these

policies are now inconsistent among programs, among purposes, and among agencies. The situation causes widespread confusion, results in distorted development, encourages local interests to "shop around" among agencies to get the most favorable arrangement, and results in deviations from principles of equity which require that beneficiaries should bear an appropriate share of project costs.

The nation's water resources are now more highly used and the demands on them are so great that they are becoming increasingly valuable. New cost-sharing policies are needed to encourage improved management of water and related resources and to increase fairness in the distribution of financial burdens. Water shortages expected in the future will create an insistent demand that the users of water and water-related services pay in full for the benefits they receive.

This paper does not consider the pros and cons of the various legislative proposals that have been put before Congress to improve water financing policy, but assumes that some increased cost sharing is inevitable and the new policies will act as a fundamental agent for change in Corps of Engineer operating procedures. The current cost sharing figures agreed upon by the administration and the Senate are shown in Table I-1 as one example of proposed policies.

Project cost sharing is not the only traditional change that has been proposed. Currently, the project survey study planning process is a 100% federal expense.

Table I-1

Cost Sharing and Financing Requirements as Contained in S. 1567 Compared to Present Policy
 (Reflects Administration/Senate Majority Leadership Compromise)
 July 18, 1985

Project purpose	Present non-Federal share		New non-Federal share	
	Cost-Share	Financing options	Cost-share	Financing options
Urban and rural flood protection	For a dam 0 percent; if other structural solutions lands, easements, rights-of-way; if nonstructural 20 percent; rebates if lands, easements, exceed 50 percent.	No repayment		5 percent cash during 30 year maximum construction, plus repayment at Federal all lands, easements, borrowing rate plus etc. Where this 1/8 percent for total is less than transaction costs. 25 percent either an additional cash contribution to equal 25 percent or an additional contribution can be made over time to equal 35 percent. An ability to pay determination is made; 5 percent cash waived if nonstructural.
Hydroelectric power	100 percent.	Repayment in accord with multiple statutes law.		
Municipal and industrial water supply	100 percent.	50 year maximum repayment with interest set a nonmarket rate; option of 10 year interest free development period.	100 percent	30 year maximum repayment at Federal borrowing rate, plus 1/8 percent for transaction costs.
Agricultural water supply	50 percent (lands, etc., included).	During construction	35 percent (lands, etc., included). An ability to pay determination is made.	30 year maximum repayment at Federal borrowing rate, plus 1/8 percent for transaction costs.
Recreation, including recreation navigation.	50 percent (lands, easements, etc., included).	During construction, or 50 year maximum repayment, with interest set at a non-market rate.	50 percent (lands, easements, included).	30 year maximum repayment at Federal borrowing rate, plus 1/8 percent for transaction costs.

Table I-1 Cont'd.

Cost Sharing and Financing Requirements as Contained in S. 1567 Compared to Present Policy
(Reflects Administration/Senate Majority Leadership Compromise)
July 18, 1985

Hurricane and storm reduction...	30 percent (lands, easements, etc., included).	During construction.	35 percent (lands, easements, etc., included).	30 year maximum repayment at Federal borrowing rate, plus 1/8 percent for transaction costs.
Aquatic plant control	30 percent (lands, easements, etc., included).	During construction (usually 1 year).	50 percent (lands, easements, etc., included).	30 year maximum repayment at Federal borrowing rate, plus 1/8 percent for transaction costs.

Further explanation: The new standardized repayment time period is flexible. In cases where the non-Federal share is not paid during the construction period, repayment is to be in a maximum of 30 years. If is anticipated that any payment which may be required for aquatic plant control or hurricane and storm damage reduction, will be made in the same general time frame as in the past.

Source: Senate Committee on Environment and Public Works

All proposed legislation submitted to the 99th Congress include cost sharing provisions for these 'feasibility studies'.¹ It is difficult to estimate what further efficiencies, if any, this policy will produce since presumably many of the desired outcomes, e.g. projects which more closely match local desires, have more unified local support, and have less costly components, will be brought about by increased local cost sharing in the project itself. This topic will be studied in more detail in Chapter III.

¹The Corps of Engineers first conducts a reconnaissance study to determine whether a Federal project can solve local and regional water resources problems. Based upon the reconnaissance, the Corps and the local sponsor jointly decide whether a full feasibility study is warranted. S. 1567 and H.R. 6 propose a 50 percent non-Federal cost share of the feasibility study. One half of the non-Federal share could be paid with in-kind services. The feasibility study is conducted in the District offices under the Federal Principles and Guidelines. Public involvement is sought in the review of the initial draft report and environmental impact statement (EIS). The report is then sent to the Division office, which has been monitoring the process, for a technical review of the report and the EIS. The Division Commander then submits the report to the Board of Engineers for Rivers and Harbors (BERH). BERH's technical and economic review also takes into consideration public comment before submitting its views to the Office of the Chief of Engineers (OCE). Upon further review, the Chief sends the proposed report to the heads of other Federal agencies and the governors of the affected states for comment. OCE considers comments on the proposed report and EIS, then prepares the final versions before submitting them to the Secretary of the Army (practically speaking the Assistant Secretary of the Army for Civil Works, ASA(CW)). The report is reviewed by ASA(CW), if approved, it is sent to the Office of Management and Budget (OMB) for comments on how it relates to the President's program. ASA(CW) also transmits OCE's report to Congress.

The Politics of Water Resources Policy
and the Federal Interest

The reality of budgetary pressures has given life to the long-recognized arguments for changing Federal water financing policy. Reducing the Federal budget deficit has provided the impetus to achieve this policy change as it has across a spectrum of Federal programs (Kraft & Vig, 1984). Dealing with the budget deficit has also provided the mechanism to increase the power and responsibility of state governments. Although this broader policy direction is now considered a longer term trend, it is one that is in concurrence with the proposed water legislation.

Federal aid to states, shown in Table I-2, as a percentage of state and local revenue has been dropping steadily from a high of 34.4% in 1976 to 22.3% in 1983. Over this same time frame, the 1981-82 recession depleted state revenue collections and many unpopular tax measures had to be taken by state legislatures. Eventually the economic recovery caught up with the states as treasuries filled up, and by FY 1984, budget surpluses became common. Because of the relative health of state revenues, the continuation of Federal aid to states has come under increased scrutiny. According to many politicians, the burgeoning deficit, feared as a problem to future economic growth, should not be expanded to help states that are now

Table I-2

Federal Aid in Relation to State-Local Own
Source Revenue, 1954, 1964, and 1969 Through 1983

Total Federal Aid ¹		As a Percent of State-Local General Revenue From Own Sources	Annual Percentage Increase or Decrease
Fiscal Year	Amount		
1954	2,967	11.4%	13.0%
1964	10,097	17.3	13.0%
1969	19,421	20.4	14.0
1971	27,121	22.8	16.6
1973	41,268	27.3	24.4
1974	42,854	25.8	3.8
1975	49,628	27.0	15.8
1976	69,057	34.4	29.1
1977	73,045	32.7	5.8
1978	79,172	32.1	8.4
1979	85,327	31.8	7.8
1980	90,836	30.4	6.5
1981	94,609	28.4	4.2
1982	86,014	23.3	-9.1
1983	88,539	22.3	2.9

¹ Federal intergovernmental expenditure, as defined by U.S. Bureau of the Census.

Source: U.S. Advisory Commission on Intergovernmental Relations.

financially able. In Congressional budget resolutions for FY 1986, general revenue sharing is to be phased out by FY 1987.

How does the reassertion of state initiative and responsibility effect a national water development program? What is the Federal interest with regard to water development in 1985? The Conservation Foundation (1984) makes this observation:

It might seem ironic that a need for debate on the federal role in water-resource development still exists as the 20th century ends, when federal activity in the field dates from the earliest days of the republic. Yet this is not so strange when one compares the historical rationales for federal intervention in water resources with the contemporary situation. ...the driving theme (behind federal involvement) usually was regional development, and the method of achieving it was a substantial or nearly total financial subsidy of program beneficiaries.

As debates on the advisability of continuing traditional water-development policies rage on, there is little dispute about the political reasons behind the present stalemate: the long-standing national consensus in favor of subsidizing regional development by water spending has disappeared. (Conservation Foundation, 1984)

As stated above, the politics of water resources development have changed. An effective political coalition that had been able to send a disproportionate amount of federal water dollars to the South and West has been shaken. One key element of this demise has been the political objections of northeastern and midwestern legislators who

find subsidization of booming areas of the country unpalatable when faced with an enormous array of needed infrastructure-related repairs and improvements in their parts of the country. Any omnibus water legislation is likely to include help for older geographic regions. Understandably, any program which may help accelerate the economic decline of the industrial north is nonsensical in their view. However, one of the objectives for enacting new water development law is to reduce distributional inequities. It is thought that when local governments are confronted with bigger cost shares applied consistently to all Federal water projects, there will be a better basis upon which to decide which projects are wanted and needed most.

The position one takes on the Federal role in water resources is directly related to one's position on the appropriate cost sharing percentages. Building a consensus among the three levels of government and individual legislators on what these percentages should be is extremely difficult. Ideally, the minimum project sponsor's percentage should be high enough to achieve the desired market test without encouraging local incremental solutions that, in their totality, harm national interests.

The Interstate Conference on Water Problems (ICWP), an organization of state water resource agency professionals,

assigned a task force to forge a state consensus on the Federal role and to translate it into cost sharing percentages. The task force defined the national interest in water development as including projects that "address national defense, international and interstate commerce, major energy development, and multi-state or regional problems" (ICWP, 1984). Their view of the extent to which these interests are provided for is shown in Table I-3. But even this definition is less than perfectly clear as 'regional problems' can be a matter of definition or perspective.

There are also identifiable local beneficiaries of projects with unarguable national implications. To what extent should they pay?

Ironically, now that many officials have made substantial progress towards agreement on cost-sharing, at least among the non-waterway using interests (compare Table I-1 and I-3), enactment of water resources omnibus legislation becomes increasingly more difficult because of the high cost of the good (economically justified) projects that have been postponed. While negotiating the reduction of annual \$200 billion deficits is the centerpiece of the national debate, the political leadership and coalition needed to pass a bill tagged as 'pork-barrel' spending with

Table I-3

Cost Sharing Proposals of the Interstate Conference on Water Problems

PROJECT PURPOSE	CONSTRUCTION COST-SHARE	PAYMENT TERMS ¹	O & M COST-SHARE
Flood Control	15-25% + Interest ²	Repayment over time with interest or without interest during construction, with lands, easements, and rights-of-way counted toward the non-federal share	15-25% multipurpose reservoir 100% local protection projects
Beach Erosion	50% + Interest ²	Repayment over time with interest or without interest during construction	
Recreation	50% + Interest ²	Repayment over time with interest	100%
Hydropower	100% + Interest ²	Repayment over time with interest	100%
Municipal and Industrial Water Supply	100% + Interest ² , subject to the ability to repay	Repayment over time with interest, subject to the ability to repay	100%
Agricultural Water Supply	100% + Interest ² , subject to the ability to repay	Repayment over time with interest, subject to the ability to repay	100%

¹ Repayment time should correspond to project life but should not exceed 50 years.

² Interest should be based on the federal long-term obligation borrowing rate at the time the non-federal repayment contract is signed.

Source: ICWP, Water Resources Development: Project Selection, Financing, and Cost Sharing, February, 1984.

\$13-18 billion in project authorizations may not be easy to find [conversations with Rep. William F. Clinger (R-Pa.) 4/85, Committee on Public Works and Transportation, and Sen. Robert Dole (R-KS) 1/85]. On the other hand, the cost sharing provisions may help to eliminate the popular 'pork barrel' designation of water resources spending and end the impasse.

Water issues are very important to states where the Reagan Administration finds its greatest support. Undoubtedly, this is one reason why they have been willing to actively support a Federal water program, albeit a more user-funded approach to development. For example, in 1985 for the first time in U.S. history, an administration offered its own version of an omnibus water bill (H.R. 1557 & 1558) that would authorize more than 60 projects. The administration also submitted 29 projects to be funded in the President's FY 1986 budget. Local agreements were reached on these 29 projects, then used to demonstrate the administration's good faith and to show that there are good water investments left to be made across the country. All of these projects had negotiated cost shares based on early Administration-supported percentages and were used as evidence that their proposals were reasonable, good public policies. Notable among the 29 was one inland navigation project, Galipolis locks and dam on the Ohio River, where

project beneficiaries have agreed to a 70% financial contribution (of course these efforts are now superseded by S. 1567).

Of the 29 proposed projects, non-Federal funds would have been used to finance about 57% of the cost compared to about 12% under traditional arrangements. The Assistant Secretary for the Army for Civil Works [ASA (CW)] in testimony to the House Committee on Appropriations, Subcommittee on Water Resources regarding the FY 1986 budget said:

We believe these projects demonstrate further the willingness and ability of local sponsors to increase their financial participation in new project development when a strong, productive project exists, a project sure to provide a return on their financial investment.

This initiative by the administration, which fed expectations across the country, keep the issue alive and added pressure on Congress to come to some agreement.

Regardless of the exact cost sharing percentages finally agreed to, these increases and up-front financing are going to initiate drastic changes in the Corps of Engineers Civil Works program. For states or project sponsors, a most fundamental result from the policy change is the addition of major water resources spending to an array of other needed current and future infrastructure investments. The nation, confronted with a well-documented

decaying stock of public assets, is without a clear idea of where to find the resources to make the needed repairs, improvements, and expansions. The Corps of Engineers and ICWP are two organizations that officially recognize that increased cost sharing is inevitable and that new institutional arrangements to do business must be developed. In an effort to find workable solutions, the Corps and ICWP co-sponsored a series of regional workshops where water development professionals could share ideas on these and related issues. This paper makes use of the workshop findings and responses to the post-workshop questionnaire. It supplements the Digest of Proceedings, which highlighted many potential problems and offered several possible solutions, from an intergovernmental perspective (ICWP/IWR, 1985). Opinions of the various water professionals from Federal, state, and local governments are drawn largely from participant input.

CHAPTER II

COST SHARING AS AGENT OF INTERGOVERNMENTAL CHANGE

The implications of up-front cost sharing for Corps' projects and planning procedures as an agent of change are enormous. The ultimate responsibility for project formulation will now be more equally shared between the state and local project sponsors and the Federal government. However, each district of the Corps will find itself with different challenges depending on the capabilities and institutional constraints faced by potential project sponsors. For other than the 'big picture', this renders the task of estimating the cumulative impact of the policy changes on current intergovernmental relations difficult. But because major projects have substantial local, regional, and national impacts, it is important to be conscious of the three or more distinct points of view among the levels of government that are often at odds. Not the least of possible disagreements may be the need for a structural project at all. More commonly, disagreements will revolve around the type of project, its scope, formulation, or the inclusion of certain project purposes to solve physically unique water problems or take advantage of the opportunities presented by the site.

In light of proposed changes, the hope for a "new partnership" among the project participants was reiterated by water officials from all three government sectors at the financing workshops. However, many participants expressed some apprehension concerning their proper roles in this new arrangement. This chapter deals with the implications of the "new partnership" as it affects the traditional intergovernmental relations of the Corps of Engineers' Civil Works program from the perspective of the Corps, the project sponsors -- including the increased leadership of state officials -- and the private financial sector, the new actor in the national water resources program.

Intergovernmental Relations as a Field of Study

The study of intergovernmental relations (IGR) is of relatively recent origin. Since the 1960s the term's usage has grown enormously but it continues to lack a common definitional understanding. William Anderson, one of the intellectual parents of the field, says that IGR is a term intended "to designate an important body of activities or interactions occurring between governmental units of all types and levels within the [United States] federal system" (Wright, 1982). The study of IGR is not the study of federalism -- it can be distinguished from federalism along the following five characteristics. First, IGR occurs within the federal system and encompasses more than is

usually conveyed by the concept of federalism, where the emphasis is chiefly on national-state relationships with occasional interest in interstate relations. IGR recognizes not only national-state and interstate relations but also national-local, state-local, national-state-local, and interlocal relations. In other words, the study of IGR includes all the various combinations of relations among the units of government in the American system.

Secondly, IGR are not interactions among abstract institutions but among personal relationships. The behavior of public officials is at the core of IGR. Wright (1982) says that "federalism deals with the anatomy of the system, whereas IGR treats its physiology."

The third characteristic of IGR is that relations are not formally ratified agreements rigidly fixed by statute or judicial decisions. Rather, IGR is the continuous, day-to-day pattern of contacts, knowledge, and evaluations of government officials. Informal as well as formal practices and principles are pursued in both competitive and cooperative interjurisdictional patterns. The problem-oriented informalities of IGR are apparent in the "formal, legal, institutional context within which those relationships originate and flourish" (Wright, 1982).

The fourth distinguishing characteristic of IGR is its awareness of the role played by all public officials in the

implementation of public programs. Lately, more attention has been given to the actions, attitudes and roles of appointed administrators and high level civil servants than to solely elected politicians. The increased focus on administrators as relevant IGR participants is a natural outgrowth of the increasingly important role played by public bureaucracies in government.

The final distinctive feature of IGR is its policy component. Over this past century, federalism increasingly translated questions of policy into questions of law and by doing so burdened legislatures and courts with pressures for policy changes (Wright, 1982). The shift to the post-New Deal politics of distribution and redistribution brought into effect new power relationships that were not properly identified with federalism. These newer IGR are also dominated by policy considerations, but without the legalistic basis. IGR became a prominent consideration with Federal aid to education, urban development, and civil rights. It has now moved on to mature in issues related to citizen participation and effective services delivery systems. The policy issues have centered on financial matters, primarily the allocation of funds and payments. Wright (1982), commenting on the policy aspects of finance, says the question basically is "who shall raise what amounts by what method from which citizens, and who shall spend how

much for whose benefit with what results? This 'fiscal fixation' has sometimes skewed diagnoses of and prescriptions for IGR problems, but the main point stands: IGR is centrally concerned with policy."

The Corps of Engineers Civil Works Program can provide examples of all of these characteristics. The program, long-dominated by national-local cooperation, has also had a large secondary element of national-state-local, interstate, and interlocal concerns. [Increased cost sharing and up-front financing will force the dominant relation to change to a national-state framework (as argued in Section C of this chapter) while the other secondary relationships remain strong. In the small projects and technical assistance programs the national-local arrangement may continue with few changes.] Another IGR characteristic is the importance of interpersonal relations among officials from the various governments. The awareness of the roles and powers of elected officials and non-elected administrators is acute. District Commanders will recognize the increased importance of working closely with state and local representatives to be effective. Their relations can be described as continuous and informal, competitive and cooperative, and problem-oriented. Finally, policy questions permeate Corps activities. Project formulation is marked by policy issues, debate and compromise. However,

only now will the program be introduced to the 'fiscal fixation' common to other Federal programs; to date, the source of funds has not been an issue.

There are three models for how IGR operate in the United States. These models are shown in Figure II-1. The first illustration, the coordinate-authority model, holds that national-state authorities are separate and not overlapping. The jurisdictions have different spheres of influence and control. Although there are some situations this model may accurately represent, and some for which it may be thought an ideal, it overly simplifies reality in our complex system. The third illustration in Figure II-1 is the inclusive authority model. In this model, hierarchal relations dominate and state and local governments are simply administrative units of the powerful national government. Some observers think that this model accurately describes the current state of IGR in the United States, while others believe that it may be the long term trend in the modern state; not an accurate reflection of current reality. In fact, recent developments point in the opposite direction.

The model depicted in the middle of Figure II-1, is the overlapping-authority model. This model holds that IGR is a patterned, interdependent, and bargained behavior among

DESIGNATION:	Coordinate	Overlapping	Inclusive
RELATIONSHIP:	Independent	Interdependent	Dependent
AUTHORITY PATTERN:	Autonomy	Bargaining	Hierarchy

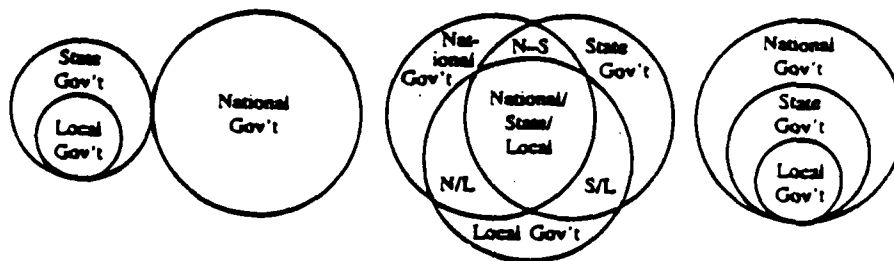


FIGURE II-1. Three Models of Intergovernmental Relations in the United States

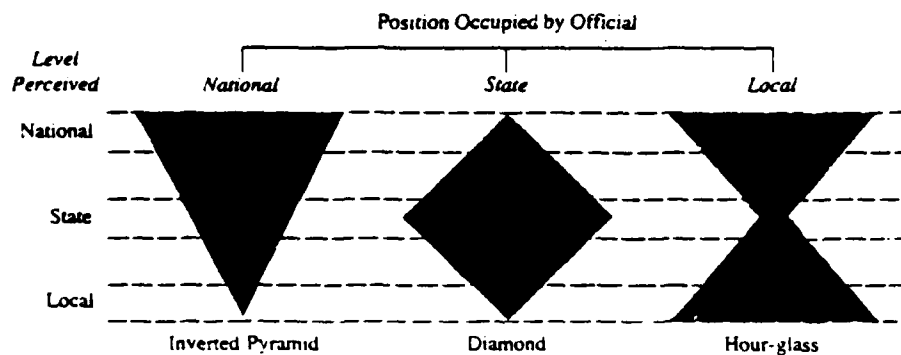


FIGURE II-2. Intergovernmental Perspectives: Officials' Outlook on the Federal System

SOURCE: Wright, D.S., Understanding Intergovernmental Relations, Brooks/Cole, 1982

national, state, and local officials. Contacts and exchanges between officials may be cooperative or competitive. In the overlapping-authority model, IGR are determined by the policy issue or problem, the status of the officials, and the constituency (local, state, or national) being represented. This model best describes the contemporary realities of IGR.

Another useful figure shown in Figure II-2 illustrates the commonly held perceptions of national, state, and local leaders of each other in the implementation of public policy. Wright (1984) says these perceptions are one of the "great forces" at work in IGR and might be called the Law of Participants' Perspectives. For example, Wright (1984):

...national officials judge their own views of problems and policies as broad, extensive, circumspect, and wide-ranging; they judge state-level officials as having more limited, narrower perspectives than their own; and they judge local officials as holding a highly restricted, particularistic, even parochial set of perspectives.

State officials see participants' perspectives in diamond form, judging their own as wide-ranging, potent, and broadly appropriate to the problems they face -- that is, they see themselves in the middle and sitting astride the IGR system. State officials see the views of national officials as constricted, narrow, and inappropriately attuned to the special circumstances and conditions of the states; and they see the perspectives of local officials as limited, particularistic, and narrow in scope.

Seen from the local level, IGR perspectives conform to an hourglass shape. Local officials see common and compatibly broad outlooks shared by themselves and national participants, but they see narrow and limiting perspectives as dominant at the state level. This fits the frequently mentioned charge by local officials that

the states are "bottlenecks" of the entire IGR system. The constricted character of the states as conduits, according to local officials, helps explain why the states are increasingly bypassed in direct national/local contacts and flow of funds.

We should avoid efforts, however, (to impute these perspectives) to all IGR actors. These graphic characterizations are unquestionably crude and do not reflect variations by types of officials within units or the great diversity among units. Nevertheless they emphasize that contrasting outlooks predominate among differently situated officials. Equally important is how much participants at each level see others as having outlooks different from their own. The aggregate effect of these multiple contrasting perspectives is a pattern of cleavage, competition, and calculation. If all three geometric shapes are laid on each other, the result is a jagged pattern, exemplifying the rivalry and disagreement, gamesmanship and overload.

These perspectives are useful in estimating some of the ways in which the Civil Works Program will be affected by the increases in cost sharing and up-front financing in the following sections.

The Implications for the Corps of Engineers

In March 1983, new directions were given to the Federal water resource agencies for how to plan for sound water projects. Replacing the Principles, Standards and Procedures for Water Resources Planning, were the Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies, or 'Principles and Guidelines', or simply the P&G. The P&G determines that the Federal objective is to "contribute to national economic development consistent with protecting the

Nation's environment, pursuant to national environmental statutes, applicable executive orders, and other Federal planning requirements." "All reasonable alternatives" are to be evaluated including the one which "reasonably maximizes net national economic development benefits", called the NED plan.

Furthermore:

Plans may be formulated which require changes in existing statutes, administrative regulations, and established common law; such required changes are to be identified. [Principle 5, Alternative Plans, (a)]

Each alternative plan is to be formulated in consideration of four criteria: completeness, effectiveness, efficiency, and acceptability. [Principle 5, Alternate Plans, (d)]

A plan recommending Federal action is to be the alternative plan with the greatest net economic benefit consistent with protecting the Nation's environment (the NED plan), unless the Secretary of a department or head of an independent agency grants an exception to this rule. Exceptions may be made when there are overriding reasons for recommending another plan, based on other Federal, State, local and international concerns. [Principle 6, Plan Selection]

The flexibility inherent in these statements may become the basis for reconciling the differing perspectives on projects being planned for jointly by states or local sponsors and the Corps of Engineers. The acceptability criteria is assumed to include the consideration of the financial capabilities of local sponsors. If the plan cannot be financed by the local sponsor (or the state will not become a co-sponsor), then it may be deemed

unacceptable. A policy decision must be made as to when these financial constraints become an 'overriding' reason for recommending another plan.

During the workshops, it was clear that most participants felt that financial feasibility should be explicitly treated early in planning. There was disagreement, however, over how and to what extent these considerations should constrain NED optimization in the formulation and selection of plans. The Executive Summary of the Digest of Proceedings of the workshops notes that:

...in some cases, a project with maximum net national economic development benefits may be - because of institutional or market reasons - unable to meet a financial feasibility test. The scope of the NED plan or the risks associated with a plan element may prevent non-Federal borrowing to finance that plan, but a non-optimal or down-scaled project may be financeable. Some workshop participants expressed concern that insistence on a NED plan which fails to meet the financial market test may lead to no project at all and, consequently, no economic benefits. It was suggested that implementing a project which can be financed but which may be less optimal from the standpoint of NED will better serve national economic development objectives than doing nothing at all. (ICWP/IWR, 1985)

Some Corps workshop participants were not convinced that the flexibility needed in the chain of command for a plan that is less than the NED optimal is there. Their belief was that traditional engineering standards and other administrative or informal rules made the project formulation and design process inflexible. In other words, they felt that even if the administration is willing to

recommend an alternative plan that may be financed, or a financeable "NED plan", it had little chance of reaching the ASA(CW) for review because of resistances built up in the system over many decades. Naturally, the extent of this problem depends on how often there is a wide divergence needed from the NED plan to make a project financeable.

A policy needs to be developed for incorporating this new element, the financial acceptability of the plan to the project sponsor, into the planning procedures. However, the immediate problem is a large backlog of project plans and designs that may need reformulation under the new cost sharing policies. Each of these proposed projects, either Congressionally authorized or approved through ASA(CW) or the Corps hierarchy, calls for more immediate, shorter term solutions. For the long term the following issues must be resolved: At what point in the planning process can commitments to project sponsors on financial objectives become constraining factors in plan formulation? Is the financially constrained plan the NED plan? Which plan or plans should be submitted to the Secretary for approval? Will district-level personnel have the authority to make needed commitments to state and local leaders to avoid the chance of agreed-to plans being negated in the chain of command? In the two-phase study process, what type of financial analysis and agreement needs to be completed in

the reconnaissance study phase versus the kind of analysis needed for the feasibility study?

Although there was a general consensus among the workshop participants that responsibility for the financial feasibility analyses should lie primarily with the project sponsor, many expressed the view that Corps planners and engineers could be valuable to this process. The most important input the Corps can provide as an extension of its benefit-cost study is the identification and documentation of those receiving project benefits. Cost recovery strategies based on beneficiaries is central to revenue-supported financing. Since economic benefits are not directly translated into cash flows, the need for training on how to incorporate this information into, or combine with, a traditional benefit-cost study is evident. Corps planners should also be familiar with the most basic traditional public financing instruments and institutions. An understanding of the 'innovative' or 'creative' techniques which are useful in uncertain markets is also valuable. (For a detailed discussion of public finance see ICWP/IWR, 1985; GFOA 1983; Smith, 1985)

The basic tenet of the increased cost sharing is to bring a market test to bear on potential projects. Although this simple concept in the abstract is intuitively rational and has been recommended repeatedly over recent years,

implementing the policy will cause a reexamination of many environmental and safety standards that in the past have been considered inviolable. While this is recognized in the Corps leadership, it is not clear where these standards can be changed to produce the savings necessary to make Federal projects more affordable. For some types of projects, staging the development of its components may lower large initial outlays. For others, limiting the project to a single purpose within the Federal interest may be an option. For multipurpose reservoirs, less costly projects can be produced primarily in two generic ways. First, they can come at the expense of environmental features, or second, of decreased project protection levels; both avenues would encounter resistance within the Corps' establishment. (Of course higher up-front financing will also increase the pressure toward allocation of costs to purposes with the lowest non-Federal share. Single purpose flood control projects are feasible because smaller flood impoundment structures reduce the land requirement and provide equal levels of protection when regulated at low levels.)

If plan 'flexibility' comes with the alteration of an environmental feature, the project could face challenges on legal grounds. The many precedents in this area would require legislative changes in order to avoid legal entanglements. The outlook for such changes would not be

good as Congress remains strongly supportive of environmental protection. However, some administratively required environmental features or practices (due solely to agency actions) might possibly be altered; these need to be identified. These costs are the hardest to finance under a user-pay rubric.

The assumption of lower levels of protection (higher risks) by project sponsors, on the other hand, may be more conducive to negotiation. Sponsors who knowingly undertake greater risks by requesting lower, less expensive, levels of flood protection cannot hold the government responsible for losses stemming from these Civil Works activities. Section 10 -11 of the Digest of Water Resources Policies and Authorities states that:

Normally, as a condition of project authorization, local interests are required to hold and save the United States free from damages due to construction, operation, and maintenance of the project works. Section 9 of Public Law 93 - 251 states that such requirement does not include damages due to the fault or negligence of the United States or its contractors (USACE, 1983).

The proposition that project design is negotiable based on risk considerations is novel and is another result of the "new partnership". The "standards" approach to acceptable risk, which protects against all but the most improbable conditions (no Corps' dam has ever failed), must be altered to consider the wishes of those receiving the benefit. Undoubtedly, the institutional resistance of many

professional engineers to risk-benefit-cost tradeoffs will impact the decision-making process. But these tradeoffs must be considered in order to enable some communities to receive even minimal flood protection. The Corps should present the project sponsor (decisionmaker) with several alternatives from which to choose. Each alternative must include the costs and benefits of the traditional standards instead of accepting them as constraints. Often, the most economically efficient project will not be the one that offers the levels of protection provided for in the past (assuming design standards become flexible).

The Implications for State Involvement

States must now become more heavily involved in sponsoring, co-sponsoring, or assisting local sponsors in regard to Federal water projects for three primary reasons. First, most local governments do not have the planning and technical capabilities available at the state level. The new policies will probably include cost sharing of the feasibility study with an opportunity for the sponsor to share directly with in-kind services. ICWP says that state water planning staffs usually have expertise, and can help project sponsors, in such areas as state water rights, financial feasibility, legal and institutional issues, projections of future populations, and needs for project outputs (ICWP unpublished, 1984; also Chapter IV presents

what can be inferred about state capabilities from general surveys.) Second, states will need to expand their role as guarantor of social equity in water resource development. It may have to distribute its available resources to those communities least able to pay. Many states now share the non-Federal costs of a project with the local project sponsor. Increased demands made on treasuries because of these existing policies, in light of increased non-Federal costs, may force states to reevaluate how much they will pay. New state policies will probably be debated partly on equity and affordability considerations. Lastly, and most importantly, state credit ratings and debt capacity are affected by the debt taken on by their subdivisions. Most states are involved in at least some small way in coordinating or assisting local governments in their debt issuance. States can help local sponsors lower financing costs and improve access to funds -- some have very extensive programs (Detail Chapter V).

Although state participation in Federal water projects has always claimed a portion of the state budget, the degree of that claim was such that bonded indebtedness was not usually necessary. Because the capital budget includes annual legislative appropriations and proceeds from the issuance of bonds, the budget and bonding capacity (both legal and 'real' financial capacities) are interrelated.

Participation in the Federal water resource program will become a competing use claiming local capital budget allotments. The portion of funds allocated by states will now vie with other infrastructure spending for the limited public works dollar. If more comprehensive planning results, it could help the state, and therefore the nation, make efficient spending decisions. There is the possibility, however, that non-Federal limits could become an impediment to building nationally significant projects and an incentive toward incremental solutions, and a loss of economies of scale.

Historically, the Corps of Engineers has worked closely with local units of government. State planning input might be important on particular projects, but was not necessarily vital; the Corps has professional capabilities in most of the germane fields. Many states have been frustrated by what they feel has been inadequate influence in the planning process (Post-workshop questionnaire, ICWP/IWR, 1985). Possible differences of opinion on various types of water resource problems are endless. For multipurpose projects, their frustrations may stem from the basic allotment of benefits to each project purpose, or to the charge of overbuilding or 'goldplating'. The state's frustrations, however, may or may not have been those of the local project sponsor. Ultimately, however, states have approved of

Federally-planned projects since the plan's future is dependent on the governor's signature (USACE 6-2 d., 1983). From some states' point of view, the choice becomes that of accepting the project as formulated by the Corps or get no project. Because gubernatorial approval must be granted, and public input considered, Corps planners and engineers often believe that they have taken into account state concerns to the degree allowed. With a larger financial contribution, however, the states' increased stake necessarily portends greater influence in the formulation process.

The Corps has shown itself able to adapt to new conditions in the past. In response to environmental critics in the 1970s, the Corps took sincere steps to involve the public in participatory decision-making (Mazmanian & Nienaber, 1979). These efforts, however, are aimed at a broad public and do not necessarily give state water officials the type of input into the planning process that they seek. State officials naturally believe that they know best what is needed for their state. They want to influence the formulation of project features toward their objectives. Environmental concerns, for instance, may lead to overdesigned projects or ones that have unnecessary components from the state perspective. Similarly, satisfying local governments does not necessarily coincide

with larger state objectives. Finally, there is the possibility that the open planning process can lead to an overall stalemate simply because of the number of diverse participants. In order to make the process manageable in the "new partnership", the states may become the spokesmen or primary project sponsors for Federal projects. They will definitely influence the current public involvement process or possibly assume responsibility for it as an in-kind planning service.

An often heard criticism from non-Federal project sponsors is that the Corps does not give the people what they really want, e.g. they overbuild, goldplate, etc. When projects have multiple purposes, this determination of what the "the people really want" is even more difficult. In the past, project sponsors did not have to bear the costs of the "extra" demands made by the public-at-large. The opposition of one group or another was placated at little or no additional expense to the project sponsor. Needless to say, this situation is history under proposed legislation.

Sometimes the relationship between the state and the local government(s) involved will be at odds over project formulation while the traditional Corps/local government relationship remains strong. If the premise is true, that the government closest to the people is the best government to solve local problems, it does not automatically follow

that state government is always best suited to meet local needs or wants. However, the traditionally close Federal/local relationship will be somewhat widened because many states will become major decisionmakers in Civil Works developments.

In almost every state there are political tensions between the rural interests and metropolitan areas. At times these tensions are more visible and confrontational than most Federal/State relations ever become. A classic example of how these forces clash in water resources policy would be an interbasin water transfer from rural areas to metropolitan areas to meet present or expected future water supply needs. Rural interests may adamantly oppose giving up local water (in western states they will likely own the water) or the building of a structural impoundment. Even if a structural solution is agreed to, negotiating the use of the storage can become a problem. Rural or downstream sponsors will likely want to maximize storage allocated to flood control while the urban or upstream sponsor will want to maximize water supply. In the past, Corps of Engineer planners were able to play the role of "honest broker" in these informal negotiations. This is not to suggest that this responsibility will no longer exist at all, but that the role could be diminished with the increased responsibility and financial stake of the state. In sum,

the question of "giving people what they really want" is not necessarily a direct result of increasing the discretion of the state.

The states (ICWP) and the Corps leadership believe there is an opportunity under new cost sharing policies to design a better system for a simpler and more streamlined planning and development process (ICWP/IWR, 1985). This could be a realistic objective because conceivably, the current length of the planning process could be shortened with two primary decisionmakers reaching agreements in the project formulation process. States will also have the flexibility to influence the process directly to various degrees and can adjust its efforts based on the priority given the problem and according to its professional/technical capabilities. However, getting the projects through the planning process is just one step in streamlining the process and to the commitment of Federal funds.

The Private Sector and Cost Recovery

New intergovernmental relationships in formulation and building Federal projects will also be affected by the participation of a new entrant -- the public finance specialists in the private sector. The new actor is necessary because annual appropriations are inadequate to meet the present demand for funds and because costs can be

recovered over time that more closely match the delivery of the benefits. Financial consultation can be retained as a separate service or can be acquired from investment bankers as part of an overall debt marketing service. Investment bankers are reimbursed from an eventual sale of tax-exempt bonds. (General obligation (G.O.) bonds are backed by the full faith and credit of the government, revenue bonds are based on some type of dedicated sources of income or special assessment. Various hybrid bonds are based on combinations of revenue and G.O. pledges.) When revenue or special assessment bonds are used to finance projects, very close scrutiny of the project benefits will need to be undertaken. State and Federal planners will need to work with these very conservative (risk averse) financial analysts in measuring projected revenue streams from these benefits. Because of their sensitivity to risk, investment bankers will be looking to verify the project's revenue streams and for methods to ensure a source of collateral (or 'credit enhancement') should they fail to be realized (For measures taken to lower project and credit risk, see Digest of Proceedings, ICWP/IWR, 1985.)

Theoretically, projects with high benefit-cost ratios would be the easiest to finance. However, the ability to finance depends on the nature of the benefit since the certainty of future revenues depends on the degree to which costs can be recovered and institutional constraints

overcome. (For an array of cost recovery strategies also see Digest of Proceedings, ICWP/IWR, 1985.) Pricing decisions are critical. They must be made with some knowledge of the sensitivity of use to price. If a project benefit is widespread, or is costly to withhold from non-payers, or involves issues of equity among beneficiaries, the use of tax and assessment powers to replace or complement pricing may be the only alternative.

Under the current planning framework, the Corps will probably have to provide at least a cursory financial capability assessment during the reconnaissance phase (first 12-18 months) of the planning process. Even though one of stated objectives of this phase is the confirmation of a local project sponsor(s), the potential sponsor(s) should help complete this task as a practical matter. However, the sponsor is not required to contribute anything since this planning phase is at full Federal expense. The results of this analysis is needed by both state and Corps officials to enable them to make financial judgements; a decision to continue forward with a cost-shared feasibility study must now be made. The retention of financial advisors, either from the states' treasury offices or from the private sector may be necessary at this point. The early financial analysis may rule out some project alternatives before the feasibility study is even begun.

CHAPTER III

THE NATURE OF THE NEW FEDERAL/STATE RELATIONSHIP

The working-level intergovernmental arrangements for developing major water projects will vary according to the kind of water problem to be tackled and the institutional characteristics of the project sponsors. Even though the cost sharing requirements for each purpose will probably be the same for all project sponsors nationwide, it is unlikely that the actual planning input and influence of the sponsors will be comparable from region to region or project to project. Different priorities, capabilities, and physical characteristics make each development unique.

The differences in the way officials from each level of government perceive one another also contributes to non-conformity between projects. State level water officials and Federal water planners generally hold conflicting perceptions about how much non-Federal influence is currently taken into account in designing Federal projects. State water resource managers sometimes feel ignored by a process characterized by Federal intransigence. Corps planners, on the other hand, generally believe that they are as flexible in meeting non-Federal desires as they are allowed to be under the law and/or standard professional

practice. Furthermore, since public involvement has become a planning requirement, many Corps' officials sincerely believe that they are giving diverse opinion an adequate opportunity to affect the planning outcome. A successful cost sharing policy can be measured in part by how well these two divergent viewpoints become merged in the future.

Bureaucratic Change and the Corps of Engineers

Historically, the Corps of Engineers has proven its ability to adapt to new conditions. One hypothesis that is often used to explain this ability is the unique military command structure over a civilian agency (approximately 300 officers overseeing 25,000 civilians). Combined with this hierarchy, however, is a highly decentralized agency which may produce seemingly inconsistent decisions among the 36 District and 10 Division offices. This situation may lead to quick implementation of broad directives, but also local variations based on the Commander's authority to interpret them and the imprecise knowledge of the natural and physical factors upon which decisions are based.

By the end of the 1960s, the agency faced substantial public opposition toward its traditional development policies. The Corps' working relationships, i.e. Corps/local government/Congress, were challenged by the demands for citizen involvement and a new awareness of ecological values. Recognizing the need to change, the

Corps' leadership made a commitment to broaden public participation in its planning activities. The Corps' decentralized structure was an asset in adapting to the various local demands for environmental sensitivity and although the overall sensitivity to environmental factors increased throughout the Corps, the degree of emphasis in each district continued to be dependent on the local citizen's commitment to being involved in Corps activities (Mazmanian & Nienaber, 1979).

The issue in the early 1970s was how to balance development and conservation. To find this new balance, a much more elaborate and explicit planning process was created. Many new personnel with economic and social skills were hired by the agency; training courses in public participation were held. But balancing these two fundamental, often opposing, objectives has been a mixed success. In many cases the Corps gained the respect of its opponents for opening up the process but were still unable to resolve the fundamental disagreements between its proposed solution and the desires of various participants, e.g. local governments, state government, environmental groups, recreational groups, individual citizens, etc., who may be lined up differently on each project.

(Evaluating the "success" of the public participation efforts is not an exact process since one's perception is

dependent upon the goals and objectives that one brings to the forum or negotiation. For an evaluation of a successful public involvement experience, see Rosener 'The Sanibel Evaluation: What Was Learned?', and for a discussion of evaluation problems generally see Delli Priscoli and Creighton, 'Developing Public Involvement Evaluations: A Federal Agency Perspective' both in Public Involvement Techniques: A Reader of Ten Years Experience at the Institute for Water Resources, IWR Research Report 82-R1, May 1983)

Mazmanian (1979) asserts that the Corps leadership recognized that even if public involvement failed to bring about a consensus solution, its concern and openness would leave a positive impression on the public. This, in turn, would "enhance the Corps' ability to reach agreement with the public on future studies" (Chief of Engineers' statement). Moreover, Mazmanian (1979) states the following:

The public relations and information objectives were viewed as intrinsically worthwhile but also as the necessary groundwork for the ultimate objective, which was the resolution of conflict over proposed projects. The recommended approach to the entire effort of involving the public was to structure the situation in such a way that a consensus would emerge. Corps planners were told to work toward a process of "cooperative problem solving in which the conflicting parties have the joint interest of reaching a mutually satisfactory solution." This called for honest, frequent, and direct communication, which would enable underlying issues to surface and thus reduce the likelihood of later misunderstanding. Such communication in turn was

expected to bring all parties involved to a recognition of and mutual respect for one another's positions and to establish an atmosphere of friendliness and trust that would be conducive to common problem-solving.

It was also felt that conflict resolution requires avoiding extreme positions, that participants must not see their choices as all or nothing or feel they must be totally for or against the Corps' recommended plan. By maintaining open communications, flexibility in searching out alternative solutions, and candor about the realistic limits of the agency, the dreaded situation of polarization and conflict could be avoided. This is to say again that if the public relations and information objectives were achieved, they would in turn promote conflict resolution. There would thus be approval of the Corps' recommended projects.

In essence the Corps was attempting to adopt the participatory model of decisionmaking as it had evolved in the human relations school of social psychology and organization theory over the past several decades.

Although the intentions in adopting participatory decision-making were noble, any hope that the process would always guide project opponents to see the wisdom of solutions favored by the Corps was misplaced. The expensive, time consuming public involvement process has fallen into disrepute among some planners and engineers partly because for all its trouble, it often does not guarantee agreement on any course of action. Despite some disillusionment with the public involvement experience, there has been substantial increase in Corps sensitivities and procedures toward receiving the input from an array of interested citizens.

A New Partnership

The most optimistic assessment coming from the regional workshops was that new partnerships between the levels of government provide an opportunity to break the logjam of overdue water projects. The Corps of Engineers and the states were said ready to work together toward the same goal. It was thought that if Congress could be convinced that there is a fundamental readiness to accept a needed policy change, it could help to finally establish a policy and put a needed Civil Works Program back to work.

Two somewhat similar scenarios of future Corps/state relationships are proposed here in light of increased state involvement. Either of these could be a positive step relative to the current situation. The first is a strong Federal/State partnership where participants have the authority to negotiate and commit their respective governments to a course of action. The coalition of public officials -- Federal, state, and local (or any combination thereof) -- versus environmental/conservation interests that often frame the public debate may be altered. The confrontation may be phased out in a "streamlined" government-to-government negotiating process producing an exclusion of other participants. Under this scenario, public involvement -- meaning representation through elected or appointed officials -- might finally become the

"cost-effective" tool that some hoped it would become. The stronger the influence of state leadership in Corps' project development, the more likely this outcome is to occur. For non-governmental citizens groups, grassroots support becomes even more critical. From an IGR perspective this would be the ultimate national-state combination.

Under a slightly different second scenario, however, the increased financial contribution by project sponsors may finally provide the missing ingredient that produces the fruitful and long sought-after participatory decisionmaking and planning process. Project development could now become a partnership between all the affected governments and interest groups. However, the interest groups rightfully claiming a prospective financial burden should have increased influence. In IGR terms, this would mean an open national-state-local program drawing input from all quarters.

The role of the Corps of Engineers in either of these scenarios will become more consultative and less authoritative in providing for the public welfare.

A Planning Framework, Project Sponsor as Client --
Corps of Engineers as Consultant

Whatever planning framework comes to characterize the relations between the project sponsor and the the Corps of Engineers, the Corps must somehow remain the guardian of the

national interest in water development and environmental protection. It must achieve this while becoming more like an consulting engineer. Establishing and maintaining this balance will require flexibility and creativity. Consultation has always been an aspect of the engineer's or planner's job, but on major project development, his/her traditional role has been closer to that of a decisionmaker without a real budget constraint. With a cost constraint, negotiation and mediation skills necessary for an effective participatory planning process, will be crucial.

Using a private sector analogy, a consultant is retained by a client to provide some technical service and advice. Likewise, service to the client, either a state and/or local government in our situation, will come to characterize the Corps input. (Obviously, with the Federal interest at stake this function is not as "pure" as found in the private sector.) A consultant is supposed to bring expertise and experience to bear on the problem and to provide an objective appraisal of the alternatives. He/she is to stimulate thinking, within a client's staff and apply his/her technical competence and judgment to the client's best interest, according to the American Consulting Engineer Council (ACEC). Using the same private sector analogy, not only does the consultant advise a client about what to do and how to do it, he/she usually aids in determining an optimal financing plan.

When there is a problem that requires some sort of expertise, one of the first and most important tasks for the Corps official (or any consultant) is to determine exactly who the client is. The determination of the project sponsor, or client, is one of the objectives of the reconnaissance phase study that is to be done at full Federal expense. If the Corps can reasonably foresee an acceptable (implementable) solution, its planning and design services to the sponsor will be contracted for at whatever rate (probably 50%) decided upon by Congress.

The ACEC says that "Engineering decisions rarely are made solely on the basis of engineering or technical conclusions. Strictly speaking, every engineering decision is a compromise which takes into consideration dollars, laws, expediency, particular circumstances, assumptions of future growth or change as well as assumptions of present conditions, and common to all factors; people, their safety, welfare and needs." The primary implication of this statement for the Corps is that a wider array of solutions to water problems need to be considered and institutionalized. Staging project development over time and nonstructural solutions are examples of less expensive recommendations that should regularly be made available. Any biases toward favorite solutions need to be eliminated.

A Model for Planning: The Negotiated Investment Strategy

How are the agreements between the project sponsors and the Corps of Engineers to be made? Should there be any structure to the negotiations that must take place? The premise implicit here is that compromises are inevitable and negotiations will be carried on informally if not formally. There are methods to make the inevitable negotiations more efficient. One model that has recently proven valuable in addressing complex public investment choices has been the Negotiated Investment Strategy (NIS). It is described here only to offer an example of how intergovernmental investment decisions have been made by groups with different objectives and that are faced with a common budget constraint.

Moore and Carlson (1984) say that the NIS should be used when there are numerous participants with diverse interests, when authority for committing resources is dispersed, when complex processes and extensive coordination are required, when differences of opinion exist or are likely to arise, when the need to resolve conflicts is strong, and when time is an important consideration motivating the parties to act. These conditions are all likely to be met in the Civil Works Program.

As a problem solving technique, the NIS integrates planning and implementation. Moore and Carlson (1984) define NIS and its procedure as follows:

The goal is to devise an implementation plan that sets forth coherent, coordinated strategies to guide and target the investment of time and resources by all public and private interests.

In the NIS, parties with appropriate resources and a stake in the result are convened to deal with a problem in a comprehensive manner. Mediated negotiations are used to resolve disputes, settle disagreements, and build consensus around a comprehensive set of actions. Those actions are outlined in a written agreement setting forth each party's roles and commitments. That agreement is reviewed and adopted by each party. The agreement provides for subsequent monitoring, to assure that commitments are carried out.

The NIS assumes that decisions about the allocation and use of public resources can be arrived at more productively if:

- a) all the parties likely to be affected by an outcome participate in the decision-making process;
- b) the interests of the parties are represented by negotiating teams;
- c) the differences among the teams are identified through face-to-face negotiation; and
- d) the teams are assisted by a mediator(throughout the process) in reaching agreement.

A typical NIS goes through four stages:

- 1) Organizing for negotiations - the period between the decision to conduct an NIS and the first negotiation session.
- 2) Exchanging information - the period immediately prior to and including the first negotiation session.
- 3) Negotiating - the period between the first negotiation session and the signing of the agreement.
- 4) Reviewing and monitoring the agreement - the period following the signing of the agreement

The NIS uses a team approach, each team is ideally composed of five to seven members. This allows for numerous participants while preventing the process from becoming unwieldy. It is essential to have one team for each major sector that will be party to the negotiations. Teams should

include people who represent the parties with a stake in the result of the negotiation, have substantial knowledge about the issues to be negotiated, are skillful negotiators, and have the authority to make commitments.

The NIS uses mediated negotiations because a mediator can assure that all important parties take part (or are represented) in the negotiations, that relevant and critical information is developed and exchanged, and that important issues are identified and defined. The mediator helps structure the debate, provides reasoning, clarifies the discussion, and seeks missing data. By using experienced mediators, it is less likely that permanent obstacles to agreement will develop. Ideally the mediator is a neutral party, i.e. someone without a direct stake in the issues, but the resistance to the use of a totally independent one is likely to be strong. However, other Federal representatives have been able to use independent mediators effectively. The Corps may be able to use specially trained mediators from the Division or Headquarters level to help direct the sessions, but some degree of trust may be lost.

The NIS is not unlike the ideal public involvement program that has already been implemented in some districts, for instance in Seattle (Mazmanian & Nienaber, 1979). However, critics of existing public involvement, as it is practiced in many districts, charge that the hearings

consist solely of an explanation of the proposed project with an opportunity to comment, but with only marginal influence over the result. The advantage of the NIS (over the most responsive public involvement program) is the use of a skilled mediator presiding over the work sessions. Agreements and compromises would be made in these iterative sessions rather than in response to letters or public hearings.

The NIS is less than the perfect model, however, as one of its most important qualifications is that those participating have the power to commit funds. Some non-Federal participants may have that vested authority, but the major Federal spending decisions are limited to the discretion of Congress. Nevertheless, District or Division Commanders could be given the authority to commit to certain courses of action concerning the project without fear of being overturned. Even with its shortcomings, the NIS provides as good a framework for the negotiation of plan formulation as can be found for working out differences under budget constraints.

CHAPTER IV

COST SHARING THE PLANNING PROCESS

When local governments experience some form of water resource problem, they can request studies through their Congressional representatives that may become authorized by the entire Congress or in some cases by committee resolution. When appropriations are made, the study is undertaken to determine whether practical solutions to the problem exists by analyzing alternative costs, benefits, social and environmental effects. Traditionally, all of the study costs were borne by the Federal government. Proposed legislation (S. 1567, H.R. 6) requires that sponsors pay for half of these costs.

The General Accounting Office Findings

In 1982 the General Accounting Office (GAO) estimated that Federal agencies have spent at least \$100 million on water project feasibility studies that were discontinued or that recommended no action over the previous 17 years. (The agencies surveyed were the Corps of Engineers, the Soil Conservation Service, and the Bureau of Reclamation) These studies failed to produce implementable solutions because the proposed benefits did not exceed the project costs (24

of 41 Corps' studies) or the local entity did not support the solution (17 of 41 Corps' studies). The GAO found that money was wasted on many of these studies after it became clear that there was no economically feasible or locally acceptable solution.

The GAO (1982) was told that one reason 'bad' studies were continued was because of the pressure by study sponsors to find a solution. The second reason given to the GAO was that some districts didn't have anything else for their planners to do. The third reason was that the continuation was thought worthwhile because the information gathered was valuable in and of itself. As an example, they cited a case where the Corps planner said the study was continued because the state wanted a good cost estimate for future reference.

The GAO (1982) found that "more often than not, the agencies reach a study's final stages only to find that their proposed solution exceeds the local entities' interests or capabilities." Of the Corps' studies that resulted in no project because of the absence of public support (17 in their sample), 62% were unaware of the deficiency until the later study phases. To remedy this problem, the GAO advocates cost sharing the study expenses with the non-Federal sponsor. This would not only provide the incentive to end the study before expending useless

funds, but would help bring the feasibility studies a higher success rate.

The GAO argues that a mutual stake in the planning outcome with local sponsors should help achieve these four objectives:

- to increase the number of studies that result in recommendations for project construction.
- to reduce the excessive length of time to complete a feasibility study
- to reduce the costs of feasibility studies by ending them immediately when found infeasible economically, socially, or legally
- to reduce the tendency of federal agencies to overbuild; to more closely match local desires

The GAO argument is as follows:

Feasibility studies are requested by and benefit local interests, who normally contribute to the costs of any eventual construction project. Since local sponsors are not required to share the costs of the feasibility study, they have little to lose if the study results in no feasible solution or if they decide not to participate in construction--as now commonly happens.

A requirement to contribute financially to the feasibility study phase would encourage local sponsors to request studies that have a high probability for solving identified problems and have substantial local backing. Contributing funds would also provide a more tangible measure of the local commitment to the study and any resulting project. Further, increased local concern with the study implied by a local contribution, and probably increased involvement in the study process, would reduce the likelihood of continuing clearly marginal studies or having a project proposed which would be unacceptable to the local sponsors.

The GAO uses the Soil Conservation Service (SCS) watershed planning activities as an example of how well

cost-shared planning works. The SCS holds that participating communities tend to have a greater interest in the study and that the process is accelerated. In Texas since 1965, 16 of 21 studies for which costs were shared resulted in favorable recommendations whereas only 2 of the 22 studies for which costs were not shared resulted in favorable project recommendations. The transfer of this success rate to the large survey studies that the GAO examined for the Corps and the Bureau of Reclamation will probably lead to overly optimistic projections.

There are three generic types of study activities undertaken by the Corps. These are comprehensive (survey studies), small projects planning ("continuing authorities"), and technical planning assistance (Section 22). The Corps has several continuing authorities, similar to SCS programs in scope, that if compared to SCS programs would also produce a high success rate and are 100% Federally-funded. They are listed in Table IV-1. [One of the suggestions heard many times at the ICWP/Corps workshops was the need to expand authorization or existing programs targeted toward small single-purpose projects of a localized nature. These small programs are aimed at making maximum use of the Corps' expertise.]

Early the same year that the GAO study was published, the new two-part planning process was implemented

Table IV-1

U.S. Army Corps of Engineers' Continuing Authorities

Authority	Type of Projects for Which Used	Limit of Federal Costs Per Project
Section 3 1945 R & H Act	Snagging and Clearing for Navigation	(2)
Section 14 1946 FC Act(1)	Streambank and Shoreline Protection for Public Facilities	\$250,000
Section 103 1962 R & H Act (1)	Small Beach Erosion Control Projects	1,000,000
Section 107 1960 R & H Act(1)	Small Navigation Projects	2,000,000
Section 111 1968 R & H Act	Mitigation of Shore Damage Due to Federal Navigation Projects	1,000,000 (3)
Section 205 1948 FC Act(1)	Small Flood Control Projects	4,000,000
Section 208 1954 FC Act(1)	Snagging and Clearing for Flood Control	250,000

(1) As subsequently amended.

(2) A limit per project is not specified; however, in any given year a maximum of \$300,000 may be used nationwide.

(3) A project exceeding \$1 million will be transmitted to Congress for specific authorization.

Source: USACE, OCE, Digest of Water Resources Policies and Authorities, June, 1983

administratively. It was designed to improve the large survey study results studied by the GAO. In the 'reconnaisance' phase, lasting from 12-18 months, the feasibility of various alternative solutions are weighed and project sponsors lined up. If it is determined that there may be an implementable solution to the problem, this phase is followed by the 'feasibility' phase study. Both study phases are now fully Federally funded. [The planning cost sharing policy proposed in S.1567 and H.R.6 calls for the feasibility phase to be cost-shared 50-50 with the non-Federal sponsor; half of the non-Federal cost, or 25% of the total, can be provided in in-kind services. This non-Federal cost share was originally promulgated administratively by the Corps until being enjoined from implementation by the House Committee on Appropriations.]

Presently, only H.R. 6 makes a distinction between the three generic types of planning activities undertaken by the Corps. This House omnibus bill, commonly called the "Roe Bill", exempts the small projects programs and technical planning assistance from the non-Federal planning expense. In the GAO study, only Corps survey (feasibility) studies were analyzed. As implied above, their findings for the Corps are not applicable to these smaller more efficient and directed programs. The distinction is important if the GAO

study findings are the basis for the cost-shared planning recommendations.

The Intergovernmental Implications of Cost-Shared Planning

In thinking about the possible implications of changes in current policy, it may be helpful to draw a distinction between the changes that will be caused by up-front cost sharing of the project itself, changes brought about by sharing the cost of the study process, and changes brought about by the current two-phase study process. When the GAO did their study, increases in cost sharing for projects was not treated as a related policy. Likewise projected improvements due to a two-phase study process, even at 100% Federal expense, were not considered. Of the four study cost sharing objectives given by GAO above; 1) ending spurious studies, 2) reducing study time, 3) increasing the percentage of studies that lead to project authorization, and 4) increasing responsiveness to local concerns, some will be achieved by these other policy changes, i.e. project cost sharing, even without planning cost sharing.

Planning cost sharing will probably have more affect on the first two goals than the second two. State or local governments are unlikely to keep pouring money into a going-nowhere study. They will also demand a timely completion of a project study. Furthermore, shortening the planning timeframe should be accomplished in part by default

when the time spent on unproductive studies is eliminated and efforts can be redirected to more promising projects (assuming labor is flexible).

Many of the necessary improvements in the planning process may be already in place because of the new two phase planning policy. The 'recon phase' study is supposed to determine the extent of public support for the project, who the project sponsors might be, what capabilities they have, and what legal constraints they face before authorization of a major feasibility study. Extremely spurious studies of problems without economically justified solutions should be eliminated from the outset; improvements occurring even at 100% Federal financing. (More on the initial results of the two-phase study process below.)

The second two objectives may only be marginally impacted toward GAO goals by this policy when enacted in addition to an up-front cost sharing policy for projects and the two-phase study process. Potential sponsors, realizing from the outset that projects will be costly to their community, will be less interested and less determined to promote spurious projects. The resulting decreased interest simultaneously improves the percentage of studies that lead to authorized projects.

As for the increased responsiveness objective, locally financeable projects almost by definition must be more

responsive to local capabilities. Therefore, the project policy, not planning cost sharing policy, will be the primary change agent in traditional planning practices, procedures, and design criteria that will allow more responsiveness to local concerns. Sponsors paying half or more of the project costs, in current dollars, will demand their preferred alternatives. If the Corps still cannot be responsive enough to satisfy project sponsor's desires because of Federal regulations or internal constraints, then legislative or administrative changes must be made to provide the flexibility.

There is another simple reason why a higher ratio of studies should lead to implementable solutions today than found by the GAO in 1982. While the present annual allocation of new planning starts is very limited, more competitive selection among potential feasibility studies should occur.

The two phase study process has been implemented at full Federal cost for over two years. As of May 1985, twenty-two reconnaissance studies had been undertaken. Of the twenty-two, twelve led to contracts with potential project sponsors agreeing to cost-share the feasibility study on a 50-50 basis or at whatever percentage approved by Congress. The other ten ended as follows: (1) two of the studies were recommended to be handled under the Corps

Section 205 continuing authority for small projects program; (2) two potential feasibility studies had no willing sponsors; (3) two were exempted from the feasibility cost sharing requirement for political reasons; (4) two were not followed up upon because they were single-purpose projects, therefore not in the Federal interest; (5) one study was terminated; and (6) one study found no foreseeable economically feasible solution.

Can any evaluations be made from this limited experience with the two-phase study process? The incentive to put projects into 205 'continuing authority' status has always been strong because it avoids a long and drawn out authorization and appropriations process. Under higher project sponsor cost sharing this incentive, if it is affected at all, will grow stronger. Real benefits can more likely be attached to the two studies that ended for the lack of a sponsor. It is possible that these feasibility studies could have been authorized without unquestioned local support. There may also have been some additional benefit from the other 'recon' studies, especially the relatively quick assessment of 'no economically feasible solution' outcome, but a proper evaluation of the two-phase study process cannot be made at this point. The primary advantage is that a decision point is forced early in the planning process.

Although the Corps of Engineers is known for its responsiveness to Congressional concerns and public pressure at the macro-level, many project sponsors have found the agency rigid when it comes to detail in planning. They can point to instances in which the planning process exceeded the four year guideline or was unresponsive to their needs or desires. (However, non-Federal sponsors have complained at least as much about the length of the review, congressional authorization, and appropriations period.) These non-Federal criticisms may be valid, but in trying to protect the Federal interest in water resources, the Corps has taken positions that are not always popular with a local, state, or environmental views in accordance with their perception of that interest. Almost by definition, cost sharing increases for project sponsors change the degree of that interest in project planning. Even though there remains a substantial Federal interest in ensuring a long planning horizon, a basin-wide approach, and the provision of unquestionably national public goods, there must be adjustments in the status quo mind-set to meet the new practical definition of the Federal interest.

In the current planning framework, decisions are based on economic, not financial, criteria. Added economic benefits to society do not correspondingly yield added cash flows. (For a detailed discussion of financial vs. economic

analysis, see Digest of Proceedings, ICWP/IWR, 1985.) As society has demanded more from its investments, project purposes have been added to large scale projects as long as the net benefits are increased. Some of these benefits are difficult to finance. In addition, long-term environmental mitigation costs have brought down the difference between the benefits and costs (and will be hard to finance and recover costs). Sometimes these projects with modest net benefits may be the best solution for certain water problems. There is a danger that these solutions won't be considered because of the amount of information that would be needed to make properly informed decisions upon completion of a relatively quick reconnaissance study. In other words, requiring a commitment of funds for the feasibility phase could possibly threaten the pursuance of what may become either marginally justified or unjustified projects. Valuable information that is usually generated from project feasibility studies may also be forfeited.

The biggest problem associated with cost-shared planning will be administering it. This is the place where the benefits of accomplishing some of the the four GAO goals for study cost sharing should be weighed against the costs. Some of the issues to be resolved are:

- (a) Assuming a limited state role, how will the appropriate share of planning costs for each sponsor of a large multipurpose project be determined in the relatively short reconnaissance study period?

- (b) Will there be a non-Federal coordinator or spokesman (a state role?) for the local sponsors of projects with multiple sponsors so that negotiation with the Corps will be manageable?
- (c) What will be done, if anything, to include direct or indirect beneficiaries that may not be willing or able to share in the planning costs since they would benefit is a consequence of a project regardless of their input? (i.e. how to prevent "free riders" in the planning process)
- (d) How will funding be coordinated? For large projects there may be several local government partners, one or more states, and the Federal government from which to acquire uncertain appropriations.
- (e) How will state and local sponsors change the public involvement process? Will they want to share in the costs of public involvement or provide the entire service? How will non- or quasi-governmental groups be included in plan development with greater state/local control?
- (f) What feasibility phase planning tasks are mandatory versus those which are negotiable?
- (g) What kinds of in-kind planning services will be allowed? How should salary differences be accounted for? Planning partners with the lower cost labor input could be penalized for efficiency.
- (h) What assurance will non-Federal planning sponsors have that negotiated agreements made at the district level will not be overturned in the review process? (OCE, BERH, ASA(CW))

The first three issues (a,b,c) are related and affect the traditional national-local understanding in Corps Civil Works planning. Under cost shared planning, relations among multiple governments become complicated. It is reasonable to assume that a coordinated single non-Federal voice is necessary. A regional group, such as a Council of

Governments, may be able to perform this service, but the state is a logical spokesman. Beyond coordination, however, there are other reasons for states to become involved in planning. If the local project sponsors want to provide in-kind services, the help of the state water resources department (at a minimum to help select a contractor, but more often to provide the service) is needed. If the state becomes the project sponsor, as expected on many projects, the question of non-Federal coordination becomes moot (except for interstate projects). A few states have intrastate regional institutions, such as the river basin authorities in Texas or the water management districts in Florida, that are able to provide a coordinating non-Federal role and participate directly in planning activities.

The third issue above (d), regarding the coordination of funding from the various non-Federal sponsors and Congressional appropriations, requires attention in the reconnaissance phase study. Since there are windows of opportunity that must be taken advantage of, the coordination of funds must be planned for strategically. For instance, referenda must be approved by legislators in time to get the question placed on the next possible ballot. Differing fiscal year calendars may also cause delays. The need for escrow accounts and their potential use should also be explored early. Again, state sponsorship would largely solve the non-Federal coordinating dilemma.

The fourth issue (e), raises concerns about changing the nature of the current Corps public involvement effort because of the new planning partnership between project sponsors and the Corps. States see this as a task that they can assume responsibility for and have credit applied to their in-kind planning service allowance. Some officials have felt that the state approach to public involvement may be very different from that of the Corps (ICWP/IWR, 1985). Will non-governmental public interest groups be given the forum and influence they have been given in the past? This question is made interesting because the state (or local governmental spokesman) will be representing citizens that now have a substantial financial interest in the project. Environmental interest groups will have to sell their case for maximum environmental protection/mitigation, or indeed the merits of having any project at all, not only to the Corps but to local citizens. (From the environmental point-of-view, a much more sympathetic hearing from potential sponsors when presenting less expensive non-structural alternatives is probably expected.)

Related to the public involvement concerns are the coordination requirements on proposed Corps projects with the other Federal agencies, primarily the Environmental Protection Agency (EPA) and the Fish and Wildlife Service (FWS). Because of the "new partnership" arrangement, an

interagency understanding of the impacts of the new cost sharing provisions needs to be pursued. The concerns of the other agencies need to be conveyed and agreements reached not only with the Corps, but with its planning partners.

The fifth and sixth issues (f,g) concern developing a mutually acceptable plan of study (POS). States do not feel that they should pay for planning that is necessary to meet strictly administratively imposed planning requirements. This raises the question: which of the current planning tasks are unnecessary? Furthermore, after the tasks of the POS are agreed to, how much should each one cost? These questions, if there is no further guidance from OCE, must be answered when developing the feasibility POS on a case-by-case basis. Putting expectations into writing at the outset is critical to reducing the chance of misunderstandings.

The seventh issue (h) is one of authority in the chain of command. Non-Federal sponsors need commitments on which to base their requests when seeking the approval of the applicable governments. District or Division Commanders could be given this authority to negotiate without the threat of being overturned at other levels. These commitments would act as project formulation constraints. How will these constraints affect the formulation of the NED plan? Is the NED plan the locally acceptable plan or a more

"pure" version? In other words, are commitments made at the field level to be included in an alternative to the NED plan that might be recommended to ASA(CW), or are they (by the acceptability criteria in the P&G) the NED plan?

The State Perspective on Cost-Shared Planning

The Interstate Conference on Water Problems' position paper on cost shared planning is the basis of the following discussion (ICWP unpublished, 1984). ICWP states the following:

Federal agencies typically begin a study with a public hearing, soliciting comments from all interested parties. The next opportunity for participation by the sponsors may be years later when the draft study comes out for review. Many states have felt that they have had little opportunity for meaningful participation in these studies when the key decisions were being made on defining alternatives for evaluation and selecting a recommended alternative.

The states object strongly to any requirement for paying a fixed percentage of the cost of this kind of federally-dominated study. Greater state participation in Federal water project studies would be acceptable only for a more efficient and flexible study process which would provide real shared control over the timing, scope, and recommendations of the study.

ICWP does not believe that cash contributions alone will ensure the real "shared control" they seek; hands-on participation is what is needed. All policymakers, Federal and non-Federal, agree that this is good policy in principle but accounting for in-kind contributions may be tedious. For instance, ICWP states that "in keeping the books on study costs, non-Federal in-kind contributions to a study

should be valued at what it would cost the Federal government to accomplish the same work." The following is ICWP's suggested way to handle joint planning:

The best way to define non-Federal study responsibilities may be by study elements rather than by a fixed percentage of the study cost. States and project sponsors will usually have expertise in such areas as state water rights, financial feasibility, legal and institutional issues, projections of future population and associated needs for project benefits, etc. These are the areas where the states have staff available and could probably take on study responsibilities with fewer budget and administrative problems. This approach would require the Federal and non-Federal study participants to work together to develop a plan of study to best utilize the resources of each partner.

As is shown in the next section (Table IV-3), states have a wide range of capabilities. ICWP's proposal would require some states to make an investment in their professional staffing.

State Engineering and Planning Capabilities;
The Water Resources Council Findings and State/Substate
Professional Water Resource Planning Capability

The remainder of this chapter attempts to determine what kinds of capabilities the states have to lend to a shared planning process. The technical capability of states in water resource planning and engineering is very diverse. Many states and local governments have relied solely on the Federal government for these services. As might be expected, the most well-developed programs are in states where water-related problems are urgent and there are adequate monetary resources. If cost-shared planning

becomes a requirement, states will not have to build up complementary technical staff unless they want to; some states may find it less expensive to simply pay cash for their share than to hire permanent staff. Others may make extensive use of consultants. The point is that cost-shared feasibility studies will not necessitate programs similar to those that complement EPA's programs. Many states, however, will want to ensure that they have as much influence as possible in the project development plans and will supply as much direct input to the process as is feasible.

Each Corps of Engineers' district participating in a shared feasibility study will probably be asked to provide those planning elements that are in shortest supply in the affected state(s). The following discussion attempts to describe the current water resources capabilities of the states. It will summarize the findings of a Water Resources Council survey and of a fifty state compilation of current state engineering and planning efforts.

A good source of information about state water planning capabilities is the report from the Water Resources Council entitled 'State of the States: Water Resources Planning and Management, Fiscal Year 1981 Update' (WRC, 1981). This information is a useful reference for assessing state water resources policy and program initiatives. It is, however, incomplete and can only be considered one

indicator of state capabilities. It is also somewhat dated since program capabilities are continually changing.

Although an imperfect indicator, the broader the mandate given a state agency the more likely it is that its staff would take a more participatory role in the planning and design processes. Table IV-2 is a compilation of the WRC's categorization of the state's water resource planning efforts. Categories A through D separate different levels and types of comprehensive water resources planning given express legislative or administrative authority by the states. Categories E and F further describe the nature of the water quantity planning effort as being continuous (E) or static, one-shot (F). All states in E or F by definition would also be member of A, B, C, or D. (For an unknown reason, North Carolina was not categorized in A - D even though it has a mandate for continuous comprehensive planning, Col. E.)

The WRC found that thirty-five states (A, B, C, D and N.C.) have express legislative or administrative authority for some type of comprehensive water resources planning. Three Category A states have the most extensive powers of these thirty-five states. Delaware, Florida, and Washington have statutes calling for comprehensive, single-agency control of the planning and management of water and related land resources. Thirteen Category B states also have

Table IV-2

Water Resources Planning and Management Matrix

34 STATES HAVE EXPRESS LEGISLATIVE OR ADMINISTRATIVE AUTHORITY TO IMPLEMENT COMPREHENSIVE WATER RESOURCES PLANNING							THE NATURE OF THE WATER RESOURCE PLANNING EFFORT				
A	B	C	D	E	F	G					
Single Agency Control of Planning and Management State Water & Related Land Resources	Comprehensive Water Quality Planning and Quantity in Single Lead Agency	Comprehensive Water Quantity Planning and Management in One Agency	Water Quantity Planning only: Management and Quality Functions Separate	Continuous Comprehensive Water Quantity Planning	Static One-Shot Comprehensive Water Quantity Planning	Planning is Element of Natural Resources Program					
3	13	8	11	22	8	10					
ALABAMA						X					
ALASKA						X					
ARIZONA	X			X	X						
ARKANSAS			X								
CALIFORNIA			X	X							
COLORADO			X	X							
CONNECTICUT	X			X							
DELAWARE				X							
FLORIDA				X							
GEORGIA	X										
HAWAII			X			X					
IDAHO		X		X							
ILLINOIS											
INDIANA			X	X							
IOWA		X			X						
KANSAS	X			X							
KENTUCKY											
LOUISIANA											
MAINE						X					
MARYLAND		X		X							
MASSACHUSETTS			X								
MICHIGAN											
MINNESOTA		X			X						
MISSISSIPPI											
MISSOURI	X				X						
MONTANA		X		X							
NEBRASKA			X		X						
NEVADA	X				X						
NEW HAMPSHIRE						X					
NEW JERSEY						X					
NEW MEXICO						X					

Table IV-2 Cont'd.

34 STATES HAVE EXPRESS LEGISLATIVE OR
ADMINISTRATIVE AUTHORITY TO IMPLEMENT
COMPREHENSIVE WATER RESOURCES PLANNING

THE NATURE OF THE WATER RESOURCE PLANNING EFFORT

A Single Agency Control of Planning and Management State Water & Related Land Resources	B Comprehensive Water Quality Planning and Quantity In Single Lead Agency	C Comprehensive Water Quantity Planning and Management In One Agency	D Water Quantity Planning only: Management and Quality Functions Separate	E Continuous Comprehensive Water Quantity Planning	F Static One-Shot Comprehensive Water Quantity Planning	G Planning is Element of Natural Resources Program
NEW YORK	X			X		X
NORTH CAROLINA						
NORTH DAKOTA						
OHIO						
OKLAHOMA		X		X		
OREGON		X		X		
PENNSYLVANIA	X			X		
RHODE ISLAND						
SOUTH CAROLINA			X		X	
SOUTH DAKOTA						X
TENNESSEE			X	X		
TEXAS*	X	X			X	
UTAH			X	X		
VERMONT	X					X
VIRGINIA	X			X		
WASHINGTON				X		
WEST VIRGINIA	X			X		
WISCONSIN	X			X		
WYOMING			X			

Source: State of the States: Water Resources Planning and Management, Water Resources Council, Sept. 1981.

*Texas Agencies fit in both categories.

comprehensive water quality and quantity planning that are integrated into a single lead agency but without control of related lands and fewer management responsibilities. Eight Category C states have responsibility for water quantity planning and management only with no quality-related concerns. This category is probably as useful as those above for shared planning for Corps of Engineer projects. Finally in Category D, eleven states plan for water quantity as a wholly separate function from water management and from quality programs. This leaves fifteen states that do not have water resource planning programs that fit into these 1981 groupings.

Twenty-two states with comprehensive water quantity planning have a mandate to do so continuously (Table IV-1, Category E.) Eight states have had a static one-shot comprehensive water quantity planning effort (Category F). Finally, at least ten states include water resources planning as part of their overall natural resources plan (Category G). The water portion of a state natural resource plan may or may not constitute the kind of effort that can be placed in Categories A-D. However, only three of these ten (Hawaii, New York, and Vermont) are included in that group of thirty-five states with comprehensive planning. Five of the ten (Alaska, Maine, New Hampshire, New Jersey, and South Dakota) are not included in the thirty-five

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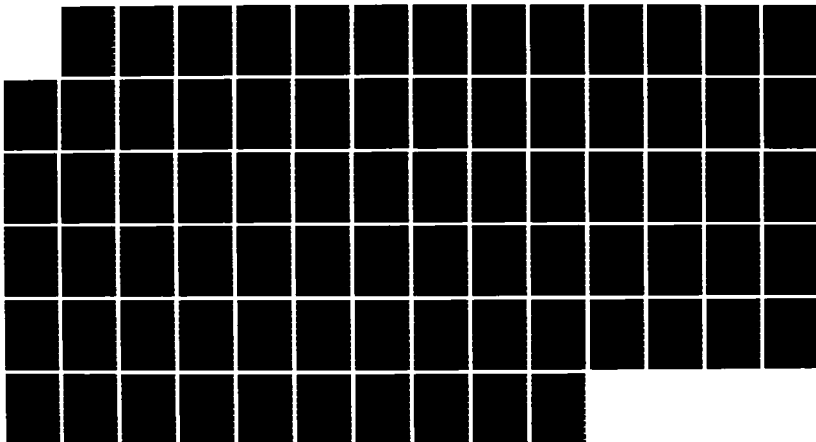
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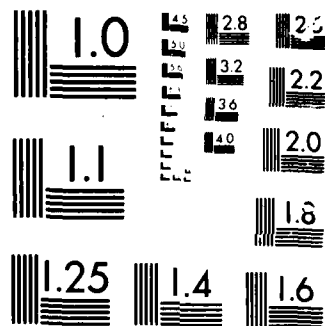
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comprehensive planning states, but according to this study's own survey presented below, show solid capabilities. If the additional Category G states are added to the states that have already been noted, the total number of states listed in the table is forty-two. The remaining eight states may not have had programs that fit these definitions but do not necessarily have weak programs, e.g. Illinois, Ohio, as can be seen below.

The WRC found that on a regional basis "it is safe to conclude that western States have tended to integrate water quantity planning and management functions in a single agency. Northeastern States, on the other hand, have been more apt than others to integrate water quality and water quantity planning functions in a single agency" (WRC, 1981). Furthermore for the nation as a whole, water quality planning and management has generally been more likely to receive comprehensive treatment at the state level than quantity concerns. One of the main reasons for this is that a large amount of river basin quantity planning has been done by the Federal agencies. Quality programs, on the other hand, have been structured to complement Federal matching programs and to comply with regulations. Cost sharing for planning might lead to bigger state programs to interact with Corps planning but the incentive to do so is less than for EPA programs because of the variety of skills

necessary for very different types of water projects, the erratic nature of the activity, and the option to pay cash for the entire cost share.

Based solely on this WRC survey, it is unclear which states are best able to participate directly in a Corps of Engineer feasibility study. Simply being one of the thirty-five states providing for comprehensive planning does not by itself indicate the capability to be a active participant in the project specific planning process. Category E of Table IV-2 may be a more effective indicator of this; a mandate for continuous planning requires permanent professional staffing. What capabilities do the other fifteen states without a 'comprehensive planning' mandate have in the way of professional staffing? A survey was undertaken for this study to better understand the professional capabilities of the states in comprehensive water resource planning. The results of the survey are shown below and are compared to the WRC survey findings.

Water officials in all fifty states were surveyed on the following questions. The results of the survey are found in Table IV-3.

- How many water resource planners and engineers are involved in comprehensive state planning (not including water quality program planning)?
- What is the approximate budget for this group?
- Is there a State Water Plan?
- Does the Plan make project/program specific recommendations?

- Are there substate regional water authorities (or special districts) that could cooperate by itself or with the state as a sponsor of a Federal project?
- Can this Authority issue general obligation or revenue bonds?
- Do they have any power of taxation?
- Do the Authorities have professional staff capabilities to jointly plan for a Federal project?

In attempting to determine different levels of water planning effort, size alone is only an imperfect indicator. For instance, Wyoming's professional capabilities in pure numbers are probably slightly just above average for the country as a whole, but on a per capita basis its efforts are substantial. In addition, there are always definitional difficulties when obtaining this information between regions, states, and persons. Because of these difficulties, the term 'professional' is used in describing the staff that may be able to enter into joint planning with the Corps.

An assessment of a state's professional capability should also include the resources at the local or regional level that may have been, or could be, Federal project sponsors. There are at least five states with medium to large state-level professional planning staffs with substate regional authorities having some substantial planning capabilities of their own. These are California, Florida, Nebraska, Texas, and Ohio. Many other municipalities, large

TABLE IV-3

State Water Planning Capabilities and Financing Authorities

A NUMBER OF WATER RESOURCE PLANNERS & ENGINEERS	B APPROX. BUDGET COLUMN 1	C IS THERE A STATE WATER PLAN?	D DOES THE PLAN MAKE PROJECT/ PROGRAM SPECIFIC RECOMMENDATIONS	E SUBSTATE REGIONAL WATER AUTHORITIES	F CAN AUTHORITIES ISSUE BONDS?	G DO AUTH- ORITIES HAVE ANY POWER OF TAXATION?	H PROFESSIONAL CAPABILITIES TO JOINTLY PLAN PROJECTS?	I OTHER REMARKS
ALABAMA	4 (oversee contractors)	~\$300K no	N/A	none				
ALASKA	11-12 total -3 hydrol- ogists -2 engi- neers -6 techni- cians	~ \$2 million 5-year apprais- als updated annually, land- use oriented, regional planning emphasis also	yes, extensive cooperation with U.S.G.S.	none				
ARIZONA	~ 25	~ \$2 million yes, emphasis on groundwater regulation and conservation	yes, water conservation rules & regs	Flood Control Districts -each county has one	yes, reve- nue bonds	yes	a few dis- tricts can, most use state and consul- ting services	
ARKANSAS	~ 4 plus IPA help	~\$100K yes, 1975 version being revised now	presents problems & potential solutions	1. Regional Water Distribution Districts 2. Levy & Drainage Watershed Improvement Districts	yes, revenue bonds yes, limited by property tax caps	no	no, state would work in their behalf	State has 3 financial as- sistance pro- grams, one is Water Devel- opment Fund, state has authorization to issue \$100 million in G.O. bonds
CALIFORNIA	Over 500 in Dept. of Water Resources	~\$300 million per year yes, \$30 mill/ per yr. for plan	yes	Reclamation & Special Districts	some	yes	In a few instances. State is advisor to local governments	\$550M project construction budget, \$100M flood control, \$10M other planning

Table IV-3 Cont'd.

A NUMBER OF WATER RESOURCE PLANNERS & ENGINEERS	B APPROX. BUDGET COLUMN 1	C IS THERE A STATE WATER PLAN?	D DOES THE PLAN MAKE PROJECT/ PROGRAM SPECIFIC RECOMMENDATIONS	E SURSTATE REGIONAL WATER AUTHORITIES	F CAN AUTHORITIES ISSUE BONDS?	G DO AUTH- CRITIES HAVE ANY POWER OF TAXATION?	H PROFESSIONAL CAPABILITIES TO JOINTLY PLAN PROJECTS?	I OTHER REMARKS
COLORADO	8	~\$500K	no	N/A	Conservancy Districts	yes	About 4 or 5 Conservancy Districts have capability	
CONNECTICUT	7-10	~\$325K	now being pre- pared, policy- oriented	some	Flood & Erosion Control Boards -appointed by Town Council -plans must be voted on by public	no	no	State takes lead on all flood control projects, water supply through Dept. of Health Services
DELAWARE	10 geohy- drologists 6 environ- mental scientists	~\$450K	no, framework policy document	N/A	Newcastle County Water Resources Agency (only one in 3 Delaware counties)	no	yes, set up for technical assistance, 4-5 profes- sionals	county agency part of overall state planning
FLORIDA	~20	no, done in each District, there is a State Comprehensive Planning Process with little funding	N/A	5 water manage- ment districts, each with great autonomy	yes	yes	several fees and taxes are levied to raise revenues for water-related project financing	GA constitu- tion gives all zoning & land use auth- ority to local governments
GEORGIA	6	~\$230K for Water Resources Branch of the DNR	no, publish management strategy (1980)	mgmt, strategy does make some	none			
HAWAII	25	~\$1 mill for Hawaii State Plan Divis. Development is one of twelve subplans	yes, within Hawaii State Plan	yes, annually	none			

Table IV-3 Cont'd.

A	B	C	D	E	F	G	H	I
NUMBER OF WATER RESOURCE PLANNERS & ENGINEERS	APPROX. BUDGET COLUMN 1	IS THERE A STATE WATER PLAN?	DOES THE PLAN MAKE PROJECT/ PROGRAM SPECIFIC RECOMMENDATIONS	SUBSTATE REGIONAL WATER AUTHORITIES	CAN AUTHORITIES ISSUE BONDS?	DO AUTH- ORITIES HAVE ANY POWER OF TAXATION?	PROFESSIONAL CAPABILITIES TO JOINTLY PLAN PROJECTS?	OTHER REMARKS
ILLINOIS	~25 (also 25 techni- cians)	Total Dept. budget is \$4.6 mil. \$1.2 million planning Budget	N/A	1. River Conser- vancy Districts (RCD), 2. Special Assessment Districts	RCDs, unlim- ited revenue bonding authority, special districts have limited G.O. authority, \$ assessed valuation	no	no, typically consultants are used	state mapping capability is especially good
INDIANA	~90 profs. in state Division of Water, including technicians	div. ~\$3.9 mil for FY86	N/A	Conservancy Districts organ- ized by courts in consultation with Division of Water	yes	yes	limited	
IOWA	~10 in Dept. of Soil Con- serva- tion ~15 in Water, Air & Waste Mgmt.	no, framework policy document	N/A	authorization for River Basin Conservancy Districts	no	no	no	
KANSAS	16 profs. no engi- neers	~800K yes, annual update	1985 version will, currently is high priority	Watershed Dis- tricts-Hydrolo- gic Conservation Districts-County Groundwater Man- agement Districts	yes, it is rare occurrence however	yes	no	have been "to- tally depen- dent" on Federal Government for engineer- ing services
KENTUCKY	9 engi- neers 12 tech- nicians	~700K no, framework document	N/A					

Table IV-3 Cont'd.

A NUMBER OF WATER RESOURCE PLANNERS & ENGINEERS	B APPROX. BUDGET COLUMN 1	C IS THERE A STATE WATER PLAN?	D DOES THE PLAN MAKE PROJECT/ PROGRAM SPECIFIC RECOMMENDATIONS	E SUBSTATE REGIONAL WATER AUTHORITIES	F CAN AUTHORITIES ISSUE BONDS?	G DO AUTH- ORITIES HAVE ANY POWER OF TAXATION?	H PROFESSIONAL CAPABILITIES TO JOINTLY PLAN PROJECTS?	I OTHER REMARKS
LOUISIANA	~9 total in WR Section of Office of Public Works (OPW), others in various agencies	~250K Total Budget Water Resour- ces Section of OPW DOT & Devel- opment	no	1. Sabine River Authority 2. Water Conser- vation, Water- shed, and Recre- ation Districts 3. Levee Districts 4. Irrigation Districts 5. Capital Area Groundwater Conservation District	yes, revenue	no, auth-no ority to collect fees special property taxes yes yes, revenue yes, revenue	no no no no no	There are also Water- works Districts (which can issue bonds and levy taxes) and Drainage Dis- tricts (which can levy an acreage tax). Technical Support is given to locals by the OPW.
MAINE	3 (all planners)	~\$150K yes, basically groundwater strategy policy document	yes	1. Watershed Districts 2. Lake Associations 3. Public Utilities	no no	no no	no, state assistance or consul- tants used	intergovern- mental agree- ments are difficult, public hearing requirements
MARYLAND	~6	no, informal periodic report on issues and problems	regional plans make specific recommendations					
MASSACHUSETTS	~26	no, policy document	N/A	1. Water Districts, 2. Water Resources Authorities (3)	yes yes as allowed by affected communi- ties	as allowed by affected communi- ties	only the Metropolitan Water Resource Authority (Boston)	

Table IV-3 Cont'd.

A	B	C	D	E	F	G	H	I
NUMBER OF WATER RESOURCE PLANNERS & ENGINEERS	APPROX. BUDGET COLUMN 1	IS THERE A STATE WATER PLAN?	DOES THE PLAN MAKE PROJECT/ PROGRAM SPECIFIC RECOMMENDATIONS	SUBSTATE REGIONAL WATER AUTHORITIES	CAN AUTHORITIES ISSUE BONDS?	DO AUTH- ORITIES HAVE ANY POWER OF TAXATION?	PROFESSIONAL CAPABILITIES TO JOINTLY PLAN PROJECTS?	OTHER REMARKS
MICHIGAN	~\$3.5 million for professional staff	no	N/A	Local River Management Act makes provisions for Watershed Councils	no	no	South East Michigan Council of Governments has some technical capabilities, rely on Federal assistance	
MINNESOTA	~45 almost all of these are in regulatory functions	no, framework, policy document	N/A	Soil & Water Conservation Districts	no	yes	Very few districts have any professional staff	"need training in Federal planning process"
MISSISSIPPI	17 (including technicians)	no	N/A	Water Management Districts	yes, revenue only	no	no, usually require state assistance	
MISSOURI	~12 professionals	no	N/A	1. Levy Districts 2. Drainage Districts	no no	yes no	no no	Resistance to land use planning zoning, only around large cities is there any planning
MONTANA	15	no, regional plans	some in regional plans	1. Irrigation Districts 2. Conservation Districts 3. County Water Districts 4. Conservancy Districts	users only yes, mostly revenue yes, G.O. on books, not used	yes yes yes	yes, some capability from state more than is called for in proposed Fed. cost-sharing policy	

Table IV-3 Cont'd.

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	NUMBER OF WATER RESOURCE PLANNERS & ENGINEERS	APPROX. BUDGET COLUMN 1	IS THERE A STATE WATER PLAN?	DOES THE PLAN MAKE PROJECT/ PROGRAM SPECIFIC RECOMMENDATIONS	SUBSTATE REGIONAL WATER AUTHORITIES	CAN AUTHORITIES ISSUE BONDS?	DO AUTH- ORITIES HAVE ANY POWER OF TAXATION?	PROFESSIONAL CAPABILITIES TO JOINTLY PLAN PROJECTS?	OTHER REMARKS
NEBRASKA	16 profs in Natural Resources Commission	~690K	no, framework document	document makes program recom- mendations, of total employees 118 recom., 30 have been adopted	Natural Resource Districts, 134 total employees in 24 districts, ~65% are profes- sionals includ- ing technicians	yes, revenue	yes, they have a limited millage rate	the financial resources of the Districts varies dra- matically from region to region	a problem has been the in- ability to encumber fu- ture legisla- tures for O&M costs
NEVADA	21	~\$1 million old for Div. of Water Resources	yes, but it is old	some					
NEW HAMPSHIRE	9 Water Resources Board	~400K	yes, Water Resources Man- agement Plan (1985)	yes	Village Districts	yes	yes	yes	Village Dis- tricts can be formed for the purpose of impound- ment of water
NEW JERSEY	over 100 engineers & planners spread over many branches	state has \$350 million water supply bond issue	yes, Master Plan for water	yes, for projects to be funded with a bond issue it must be in Master Plan	North Jersey Water Supply Commission - state agency with regional focus	yes-revenue bonds	no	yes	state has numerous autonomous communities, very decentralized authority
NEW MEXICO	~95 total office	\$1.3	no						
NEW YORK	~30 in Bureau of WR, Bureau of Flood Protection	~\$1.5 million	no, working on management strategy due in 1987, regional studies	no	Hudson River- Black River Regulating District	yes	yes	yes, have some capability	no more dis- tricts like this are seen for the future

Table IV-3 Cont'd.

A NUMBER OF WATER RESOURCE PLANNERS & ENGINEERS	B APPROX. BUDGET COLUMN 1	C IS THERE A STATE WATER PLAN?	D DOES THE PLAN MAKE PROJECT/ PROGRAM SPECIFIC RECOMMENDATIONS	E SUBSTATE REGIONAL WATER AUTHORITIES	F CAN AUTHORITIES ISSUE BONDS?	G DO AUTH- ORITIES HAVE ANY POWER OF TAXATION?	H PROFESSIONAL CAPABILITIES TO JOINTLY PLAN PROJECTS?	I OTHER REMARKS
NORTH CAROLINA	~15, Office of Water Resources	no, framework study in 70s, regional studies						Very wide ar- ray of inter- governmental arrangements are available to localities, strong finan- cial oversight and bonding assistance
NORTH DAKOTA	~15	yes, 1983	yes	Water Management Districts	no	yes, 4 mills per \$1 of assessed value- tion	most do not, State has field of- fices for technical assistance	Water Re- sources Trust Fund is funded by oil, gas, and coal revenues
OHIO	~5 profs. 1 engineer 4 planners	yes, 5 regions	yes	1. Conservancy Districts 2. Soil & Water Conservation Districts (ea. county)	yes	yes	yes (assess benefits) no	Technical staffs of Conservancy Districts varies
OKLAHOMA	~9 for Planning Div. of OK Water Resources Board	yes	yes	1. 10 Substate Planning Districts 2. Red-Ark Water Development Authority 3. Grand River Dam Authority	no	no	yes	major issue is the east- west transfer of water
OREGON	6 in tradition- al planning many in other regulatory functions	no, basin-wide programs	basin-wide yes	numerous Special Districts	yes, revenue only	yes	no	state uses G.O. bonds to raise money for local water projects

Table IV-3 Cont'd.

A NUMBER OF WATER RESOURCE PLANNERS & ENGINEERS	B APPROX. BUDGET COLUMN 1	C IS THERE A STATE WATER PLAN?	D DOES THE PLAN MAKE PROJECT/ PROGRAM SPECIFIC RECOMMENDATIONS	E SUBSTATE REGIONAL WATER AUTHORITIES	F CAN AUTHORITIES ISSUE BONDS?	G DO AUTH- ORITIES HAVE ANY POWER OF TAXATION?	H PROFESSIONAL CAPABILITIES TO JOINTLY PLAN PROJECTS?	I OTHER REMARKS
PENNSYLVANIA 30 prof. in plan- ning state water projects	~\$1.6M million	yes, 22 volumes	yes	County & Municipal Authorities	yes, revenue	no	no, state personnel would be re- assigned to Fed. projects	
RHODE ISLAND 5	~\$250K	no	N/A					
SOUTH CAROLINA ~45	\$2.5 million total for Water Resources Commission	no, annually updated policy document	sometimes speci- fic projects are in report if there is to be a bond issue			Joint govern- mental taxation subject to referendum	no	state cannot commit future years funds
SOUTH DAKOTA ~10-12	~400K	yes	yes	1. Water Develop- ment District(6) 2. Water User Districts -Watershed -Irrigation	no yes	not di- rectly* yes	yes no	*Water Devel- opment Dis- tricts can't contract for projects, they are governed by elected rep- resentatives
TENNESSEE 1 state water resource planner		no, but starting one, currently basin-wide planning	working on plan that will make specific recommendations	Obion-Forked Deer River Basin Authority-(only authority out- side Tenn. River Basin, acts as sponsor for Federal projects)	yes, G.O. through state agencies	no, funded through legisla- tive appropria- tions	no	other river authorities cooperate with TVA

Table IV-3 Cont'd.

A	B	C	D	E	F	G	H	I
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TEXA.	12-15 statewide planners	yes \$1.5 million for Plan. Div.	yes	1. River Authori- ties 2. Municipal Water Districts 3. Conservation Districts	yes, revenue	no	yes	River Author- ities have great auton- omy over river basin develop- ment, some have a great deal of technical ex- pertise, 29 substate entitles in Texas-15 of which have extremely active programs
UTAH	16, Div. of Water Resources	\$750K In the process of developing plan, it will be continuous	It will	1. Water Conser- vancy Districts -Single County -Multi-County 2. Water Improve- ment Districts 3. Special Service Districts	yes	yes, 2 mil. per de- velopment no	no	
VERMONT	10-12	\$6 million entire Dept. Budget	yes	none	yes, revenue	no	yes, revenue	
VIRGINIA	20-24 of 30 on Water Con- trol Board are in water supply planning	no, Water Supply Planning Program 5 year study ending in 1987, needs to 2030	the 5-yr. Water Supply Study will make recom.	none				

Table IV-3 Cont'd.

A	B	C	D	E	F	G	H	I
NUMBER OF WATER RESOURCE PLANNERS & ENGINEERS	APPROX. BUDGET COLUMN 1	IS THERE A STATE WATER PLAN?	DOES THE PLAN MAKE PROJECT/ PROGRAM SPECIFIC RECOMMENDATIONS	SUBSTATE REGIONAL WATER AUTHORITIES	CAN AUTHORITIES ISSUE BONDS?	DO AUTH- ORITIES HAVE ANY POWER OF TAXATION?	PROFESSIONAL CAPABILITIES TO JOINTLY PLAN PROJECTS?	Other REMARKS
WASHINGTON	10 planners 8 project assistance engineers	~550K no, report to legislature, framework, policy position	N/A	1. Irrigation Districts 2. Reclamation Districts 3. Public Utility Districts (PUD)	yes	yes	some PUDs have technical capability	referendum required for issuance of G.O. debt
WEST VIRGINIA	~7 ~400K	no, framework within state Natural Resource Plan	N/A	Statewide Water Development Auth- ority (low cost loans, grants)	yes, revenue	no	no	Authority is just begin- ning to be- come involved in water sup- ply area
WISCONSIN	~20 ~500K	no	N/A	Wisc. Valley Public Improve- ment Corporation PUDs-for special purposes, petition, public hearings	yes	yes	no	DNR has broad authority over water, water is in public trust
WYOMING	7-8 Water Commission 10 State Engnr's Of. 3-4 Dept. Econ. Plan- ning & Development	no \$400K- St. Engnr's Office	WADC-draws up very specific plans	1. Irrigation Districts 2. Watershed Im- provement Districts	yes	yes	no	
					yes	yes	no	

SOURCE: Interviews with state water resource officials.

suburban areas, or Special Districts have professional capabilities but are unique within states and have not been institutionalized statewide.

This study's findings differ somewhat from the picture presented by the Water Resources Council in 1981. Over this time period there may have been several changes in state programs, however, and the differences may be more definitional than substantive. In trying to assess professional or technical capabilities, a state water planning effort that makes project specific recommendations is assumed here to have greater technical capabilities and/or have spent a great deal more effort in their planning.

Eighteen states have a state water plan that makes project specific recommendations. Seven of these (Alaska, Maine, New Hampshire, New Jersey, North Dakota, Ohio, and South Dakota) are not among the WRC's thirty-five states noted for some type of comprehensive planning. Moreover, this leaves only eleven states out of the thirty-five with some type of comprehensive planning that do have this type of plan. It is assumed here that the discrepancy lies in the use of the terms 'comprehensive planning' in the WRC study and in the current study's emphasis on project specific recommendations.

There are five more states that are beginning or are in the process of writing a major state water plan. Many

others do comprehensive, project specific planning using a regional or basin-wide approach. Many states publish a framework document of policy positions or recommendations that they may consider a plan. The bottom line is that states with the most urgent water quantity problems are likely to have the most Corps-compatible programs. They have developed the most professional basin-wide planning capabilities, but like other states, still rely on the Federal government as a primary source of technical expertise.

The degree to which these state efforts translate into project implementation varies. Some state water plans are specifically linked to state programs or appropriations. One of the most effective may be New Jersey's. The State's water supply bond revenues can only be used for projects that are in the Plan.

CHAPTER V

STATE INSTITUTIONS; FINANCING CONSTRAINTS AND FINANCIAL ASSISTANCE PROGRAMS

Traditional intergovernmental arrangements for local sponsorship of Corps of Engineer water projects will be substantially changed following enactment of proposed cost sharing increases. New institutions, policies, or programs may be necessary on the part of the states. Each state, however, is unique in its approach to fiscal management and public expenditures. Its public works investments are financed in a variety of ways and are made within constitutional and statutory constraints.

The effect of the new Corps' policy on individual states will vary according to their traditions and capabilities. For instance, a General Accounting Office (GAO) study found that 18 states were unable to enter into long term agreements with the Federal government because they are restricted from encumbering future legislatures (GAO, 1982). For water-related investments, the state's existing programs may be broadened, its local cost sharing policies altered, or new programs created, to reflect the increased responsibility with regard to Federal water projects.

The objective of this chapter is to discuss the differences between state and Federal budgeting procedures and purposes, to highlight some of the state-imposed fiscal constraints, to describe alternative approaches states may use in aiding local authorities finance public works, and to describe the pros and cons of various public policies toward water finance.

Federal Versus State Budgets

There are two major distinctions that can be made between the Federal and state budget procedures and purposes. First, the Federal budget is used as an instrument of national economic policy. The national government is often called upon to stabilize business cycle fluctuations through the use of fiscal and monetary policy. There is a widely-held belief that it is effective and/or proper for the national government to stimulate latent demand in a stagnant economy through the use of expansive fiscal policies, i.e. tax cutting and/or increased spending. The national government is also singularly responsible for monetary policy. Federal Reserve decisions affect interest rates and inflation, thereby influencing the investment climate. Therefore, monetary and fiscal policy-making together impact the national economy in a manner the states are unable and ill-equipped to do; the state budget is a much more limited instrument of economic policy.

The health of state finances and therefore the capability to increase state responsibility in society is dependent on national economic factors. In fact, economic factors make the largest impact on increases in state tax revenues. Table V-1 lists state revenues over the last several years and shows the degree to which political actions to raise revenues or economic factors were responsible for the increased revenues.

Even though state revenues were growing from 1977 - 1983, the rate of increase dropped in each of these years. By 1984, however, the effects of the economic recovery caught up with the states and their revenue collections increased substantially. Total state tax revenues increased by about 15 1/2 billion, a 14.9% jump. Of the increase, 28.9% was due to political decisions to raise taxes in some manner. 71.1% of the increase was a direct result of improved economic factors (ACIR, 1984).

A second distinction that can be made in comparing Federal and state fiscal policies is the treatment of debt in budgeting and reporting. State budgets separate operating and capital budgets, i.e. ongoing program expenditures from major construction and renovation of public assets. The Federal budget does not make this distinction. (However P.L. 98-501, which became law in 1984, for the first time calls for a Federal accounting of

Table V-1

Sources of Increases in State Tax Collections, 1964-1984
(in billions of dollars)

Fiscal year	Total Tax Revenue Collections	Dollar Change in Total Tax Revenue	Percentage Change in Tax Revenue 1/	Dollar Change Resulting from Political Actions 2/	Percentage of Increased Tax Revenue Resulting from Political Actions	Dollar Change Resulting from Economic Factors 3/	Percentage of Increased Tax Revenue Resulting from Economic Factors
1984	\$197.00	\$25.6	14.9%	7.4	28.9%	\$18.2	71.1%
1983	171.44	8.8	5.4	3.5	39.8	5.3	60.2
1982	162.66	12.9	8.6	3.8	29.5	9.1	70.5
1981	149.74	12.7	9.2	0.4	3.1	12.3	96.9
1980	137.08	12.1	9.8	-2.0	-16.5	14.1	116.5
1979	124.96	11.7	10.3	-2.3	-19.7	14.0	119.7
1978	113.26	12.2	12.0	0.5	4.1	11.7	95.9
1977	101.09	11.8	13.3	1.0	8.5	10.8	91.5
1976	89.26	9.1	11.4	1.0	11.0	8.1	89.0
1975	80.16	5.9	8.0	-0.4	-6.8	6.3	106.8
1974	74.21	6.1	9.0	-0.5	-8.2	6.6	108.2
1973	68.07	8.2	13.7	0.9	11.0	7.3	89.0
1972	59.87	8.3	16.2	5.0	60.2	3.3	39.8
1971	51.52	3.6	7.5	.8	22.2	2.8	77.8
1970	47.96	6.0	14.4	4.0	66.7	2.0	33.3
1969	41.93	5.5	15.2	1.3	23.6	4.2	76.4
1968	36.40	4.5	14.1	2.5	55.6	2.0	44.4
1967	31.93	2.5	8.7	0.5	20.0	2.0	80.0
1966	29.38	3.3	12.5	1.3	39.4	2.0	60.8
1965	26.13	1.9	7.8	0.1	5.3	1.8	94.7
1964	24.24	2.1	9.6	1.0	47.6	1.1	52.4

1/ Increase in actual tax collections divided by previous year collections.

2/ Political action includes discretionary legislative actions such as adopting or repealing a tax, raising or lowering a tax rate, and changing the tax base. Does not include administrative tax adjustments or changes in tax collection procedures. Figures in this column represent legislative tax changes that resulted from actions passed in the prior legislative session (e.g., FY 84 tax changes were passed in the 1983 session).

3/ Economic growth (or decline) and inflation's effect on revenue growth.

Source: U.S. Advisory Commission on Intergovernmental Relations, Significant Figures of Fiscal Federalism, 1984

capital expenditures.) Most states and/or local governments incur debt by floating tax-exempt bond issues to finance public investments. Only the current annual payment of principal and interest is accounted for in the year's budget. Therefore, the meaning of a "balanced budget" is different at the various levels of government. The fact that 49 states require some form of budget balancing and the Federal government does not, is really not meaningful in any economic sense. If the Federal government were to account for its military and civilian capital investments as states do, its budget would be in greater 'balance'.

Constitutional and Statutory Budget and Debt Limitations

Balanced budget requirements have been a long-standing tenet of state public finance. All states except Vermont have constitutional or statutory mandates that limit budget deficits; however, the stringency of these requirements varies greatly between states. Table V-2 shows what type(s) of law is applicable in each of the fifty states. It also shows the degree of stringency of the applicable laws on a scale of one to ten. The language of the law typically calls for the state General Fund, appropriations, or expenditures to balance with estimated or actual revenue collections (NASBO, 1982).

The balanced budget procedure, while not allowing for deficit spending, can often lead to state surpluses even in

Table V-2

Balanced Budget Requirements

(Is requirement for balanced budget statutory(S) or constitutional(C)?
What is the nature of requirement?)

States	(points)	(1) Statutory	(2) Constitutional	Governor only has to Submit a Balanced Budget	Legislature only has to Pass a Balanced Budget	May Carry Over a Deficit but Must be Corrected in Next Fiscal Year	(4)	(6) State Cannot Carry Over a Deficit into Next Fiscal Year	(8) State Cannot Carry Over a Deficit into Next Fiscal Year	Degree of Stringency Scale (high=10; low=1)
New England										
Connecticut	X	X		S*	S	S				5
Maine	X							S		9
Massachusetts		X		C						3
New Hampshire	X			S						2
Rhode Island		X						C		10
Vermont										0
Midwest										
Delaware			X					C*		10
Maryland		X								6
New Jersey		X		C	C	C				10
New York		X		C						3
Pennsylvania	X		X	S,C	S	S,C				6
Great Lakes										
Illinois		X		C	C					4
Indiana		X						C*		10
Michigan		X				C				6
Ohio	X		X					S,C		10
Wisconsin		X				C*				6
Plains										
Iowa		X								10
Kansas	X							C		9
Minnesota	X									8
Missouri		X				S,C				10
Nebraska		X								10
North Dakota		X								8
South Dakota	X		X			C		S,C		10
Southeast										
Alabama		X								10
Arkansas	X							C		9
Florida	X							S,C		10
Georgia		X								10
Kentucky	X							C*		10
Louisiana		X								4
Mississippi	X									9
North Carolina	X							S,C		10
South Carolina	X					S,C				10
Tennessee		X				C				10
Virginia	X									8
West Virginia		X						S,C		10

Table V-2 Cont'd.

States	(points)	(1) Statutory	(2) Constitutional	Governor only has to Submit a Balanced Budget	Legislature only has to Pass a Balanced Budget	May Carry Over a Deficit but Must be Corrected in Next Fiscal Year	State Cannot Carry Over a Deficit into Next Fiscal Year	State Cannot Carry Over a Deficit into Next Fiscal Year	Degree of Stringency Scale (high=10; low=1)
Southwest									
Arizona		X						C	10
New Mexico		X						C	10
Oklahoma		X						C	10
Texas		X			C			C	8
Rocky Mountain									
Colorado		X						C	10
Idaho		X						C	10
Montana		X			C			C	10
Utah		X						S,C	10
Wyoming		X						C	8
Far West									
California		X		C		C ^a			6
Nevada		X		S	C				4
Oregon		X		S			C		8
Washington		X				C			8
Alaska		X		S		C			6
Hawaii		X		S,C	.		C	C	10

Source: U.S. Advisory Commission on Intergovernmental Relations, Significant Features of Fiscal Federalism, 1984.

accurately estimate in advance the level of revenues that will be generated. These erratic surpluses can lead to overly optimistic judgements about the capabilities of states to shoulder larger responsibilities for public expenditures. In addition, making long-term commitments is difficult when future revenues are so dependent on the health of the national economy, as was shown in Table V-1. In addition, a large component of state and local income is (at least until 1987) Federal general revenue sharing funds, and although most states may not borrow money to balance their operating budgets, their Federal receipts contribute to total U.S. budget deficits.

Constitutional and statutory provisions that constrain spending are of three major types: those that (1) restrict the ability to incur debt; (2) require balanced budgets or appropriations; and (3) prescribe the management of impending or actually incurred deficits (NASBO, 1982). An array of these state fiscal discipline mechanisms are shown in Table V-3.

Table V-4 is the result of a survey completed for this study of the various limits on debt financing by each state on itself and on its local governments. This survey found that only four states have no restrictions on their own general obligation debt including voter approval requirement. Many of these limits are high enough that they

Table V-3

State Fiscal Discipline Mechanisms

STATE	Tax and Expenditure Limitations	Balanced Budget Requirement	Require Super- Majority Vote to Pass Tax	Index Income Tax	Gubernatorial Line-Item Veto	Fiscal Note Review Procedure	Program Evaluation & Sunset	"Rainy Day" Funds
TOTAL	18	49	7	10	43	41	29	24
New England								
Connecticut		X			X	X	X	X
Maine		X		X			X	
New Hampshire		X				X	X	
Rhode Island	X	X				X	X	X
Vermont		X					X	
Mideast								
Delaware		X	X		X		X	X
Maryland		X			X		X	
New Jersey		X			X	X		
New York		X			X			X
Pennsylvania		X			X	X	X	
Great Lakes								
Illinois		X			X	X	X	
Indiana		X				X	X	X
Michigan	X	X			X	X	X	X
Ohio		X			X	X	X	X
Wisconsin		X		X	X	X		
Plains								
Iowa		X		X	X	X		X
Kansas		X			X		X	
Minnesota		X		X	X			X
Missouri	X	X			X	X		X
Nebraska		X			X	X		X
North Dakota		X			X	X		
South Dakota		X	X		X	X		
Southeast								
Alabama		X			X	X	X	
Arkansas		X	X		X	X		
Florida		X	X		X	X		X
Georgia		X			X	X	X	X
Kentucky		X			X	X		X
Louisiana	X	X	X		X	X	X	
Mississippi		X	X		X	X		X
North Carolina	X	X		X	X	X	X	X
South Carolina	X	X			X	X	X	X
Tennessee		X			X	X	X	X
Virginia		X			X	X		X
West Virginia		X			X	X	X	
Southwest								
Arizona	X	X		X	X	X	X	
New Mexico		X			X	X	X	X
Oklahoma		X			X	X	X	
Texas	X	X			X	X	X	

Table V-3 Cont'd.

STATE	Tax and Expenditure Limitations	Balanced Budget Requirement	Require Super- Majority Vote to Pass Tax	Index Income Tax	Gubernatorial Line-Item Veto	Fiscal Note Review Procedure	Program Evaluation & Sunset	"Rainy Day" Funds
Rocky Mountain								
Colorado	X	X		X	X	X	X	X
Idaho	X	X			X	X		X
Montana	X	X		X	X	X	X	
Utah	X	X			X	X	X	
Wyoming		X			X	X	X	X
Far West								
California	X	X	X	X	X	X		X
Nevada	X	X			X	X		
Oregon	X	X		X	X	X	X	
Washington	X	X			X	X	X	X
Alaska	X	X		X	X	X	X	X
Hawaii	X	X			X		X	

NOTE: In several cases, the measure has been adopted by a state, but not yet implemented.

Source: U.S. Advisory Commission on Intergovernmental Relations, Significant Features of Fiscal Federalism, 1984.

do not pose a real constraint and states have an almost unlimited legal debt capacity. However, the National Association of State Budget Officers (NASBO) has determined that constitutional restrictions on debt above a certain amount have the de facto effect of requiring a balanced budget in 16 states. Furthermore, the process to overcome the limits in these 16 states is considered more strenuous than passing a referendum; itself a difficult undertaking. In other words, NASBO did not include in the 16 those states (9) whose ceilings could be overridden with voter approval -- a constitutional amendment. Outcomes of referenda are often difficult to predict ahead of time. In some states approval may simply be considered unattainable. When debt for projects is to be voted on, it is often necessary to wait until a package of projects can be put together so that statewide passage is achievable.

One reason for low effective borrowing ceilings is that the debt limit was established so long ago that they have an allowable debt in current dollars that for any practical purpose is zero. Nebraska is an example of such a state that is limited to debt obligations not to exceed \$100,000. Special arrangements would have to be made for the state to enter into sponsorship of a major Federal project under proposed cost sharing increases since it is unlikely that the legislature could fund the entire sponsor

Table V-4

State Imposed Constraints on Debt Financing

	MAGNITUDE OF STATE GENERAL OBLIGATION DEBT ALLOWED	STATE LIMITATIONS ON DEBT OF LOCAL GOVERNMENTS	STATE REFERENDUM REQUIREMENTS FOR: ISSUANCE OF G.O. DEBT FOR: STATE LOCALS	INTEREST RATE CEILINGS
ALABAMA	\$300,000 Constitutional Cap without referendum	Cities-G.O debt allowed to 20% of the assessed valuation of taxable property	Yes	8% (may be changed shortly)
ALASKA	No limit with approval of voters	None	Yes	None
ARIZONA	\$350,000 Constitutional cap	LIMIT - 10% of assessed valuation for cities and counties	N/A	None
ARKANSAS	No limit	City/county-5 mills allowed per project	Yes	Specified in each authorization
CALIFORNIA	No limit	Prop. 13-limits property assessment and property tax rates	Yes, req. 2/3 vote	State-11%, to sunset in 1986 locals - 12%
COLORADO	Constitutionally prohibited, \$100,000 for casual deficits	Counties-1 1/2% of assessed valuation municipalities-3% of assessed valuation No limits on special districts and for water development	N/A	Yes
CONNECTICUT	Statutory - 4 1/2 times the previous years tax receipts	Very limiting, sliding scale based on tax receipts and by purpose from 2 1/2 to 4 1/2 times receipts	No	None

Table V-4 Cont'd.

	MAGNITUDE OF STATE GENERAL OBLIGATION DEBT ALLOWED	STATE LIMITATIONS ON DEBT OF LOCAL GOVERNMENTS	STATE REFERENDUM REQUIREMENTS FOR: ISSUANCE OF G.O. DEBT FOR:		INTEREST RATE CEILINGS
			STATE	LOCALS	
DELAWARE	1 1/2 times the General Fund reserve of the preceding year	Only for school districts	No	Yes	None
FLORIDA	50% of tax revenues for average of two preceding fiscal years	Counties, municipalities 10 miles, Water Mgt. 1 mile special districts- referendum	No	No	Bond buyer 20-Bond index plus 150 basis points
GEORGIA	10% of prior year's receipts	None	No	Yes	None
HAWAII	18.5% of average of prior 3 years General Fund revenues	County-15% of assessed value of total property	No	No	9.5%, but under temporary increase to 14% ending 6/30/87
IDAHO	\$2,000,000, unless approved by the voters, very little debt outstanding	2% of market valuation of property	Yes	Yes, 2/3 vote but simple plur- ality for water & sewer	None
ILLINOIS	Statutory, \$6.4 Billion of which \$1.7 B is available 5/85	None	No	No	125% of Bond Buyer 20-bond index
INDIANA	Constitution prohibits debt	2% of assessed valuation valuation of taxable property for all political subdivisions	N/A	No, but can be stopped with petition & challenge	None
IOWA	\$250,000 cap without referendum	Cities - 5% of assessed valuation, a different base is used for calcu- lating G.O. debt limit than for tax limitations	Yes	Depends on purpose of debt, if defined as Essential Corporate Purpose not needed (e.g., water)	None
KANSAS	Constitution prohibits debt	15% of assessed valuation must comply with State Budget Law and Cash Basis Law	N/A	Depends on purpose	Bond Buyer 20-Bond index plus 2%

Table V-4 Cont'd.

	MAGNITUDE OF STATE GENERAL OBLIGATION DEBT ALLOWED	STATE LIMITATIONS ON DEBT OF LOCAL GOVERNMENTS	STATE REFERENDUM REQUIREMENTS FOR: ISSUANCE OF G.O. DEBT FOR: STATE LOCALS	INTEREST RATE CEILINGS
KENTUCKY	\$500,000 unless approved by voters	None	Yes	None
LOUISIANA	Statutory-Annual debt service is limited to 10% of average revenues over the previous three years	Limited by purpose and by % of assessed valuation	No	No, but if 5% of voters petition then refe- rendum must be held
MAINE	\$2,000,000, without voter approval	None	Yes	None
MARYLAND	No limit	None	No	None
MASSACHUSETTS	No limit, requires 2/3 majority in Legislature	City-limited to 2 1/2% of its equalized valuation, Town-limited to 5%, can get approval for higher amounts from State Finance Board	No	None
MICHIGAN	Limited by Statute for each purpose	Counties, Charter Townships - 10% of assessed valuation, Home Rule Cities 10% plus exclusions for Special Assessment & Revenue Bonds, General Law Townships - no debt limitation	Yes	18% Yes, for Issues requiring an unlimited tax pledge
MINNESOTA	No limit on specified purposes	7 1/3% of assessed valuation, for Special Assessments - only 20% of a revenue-backed issue can be from higher taxes	No	Non for state, local limit based on Bond Buyer 20 Index, (round up to next whole number and add one percentage point, add one more point for Special Assessment issues) Yes, if debt is not issued at a greater than \$300,000/ quarter

Table V-4 Cont'd.

	MAGNITUDE OF STATE GENERAL OBLIGATION DEBT ALLOWED	STATE LIMITATIONS ON DEBT OF LOCAL GOVERNMENTS	STATE REFERENDUM REQUIREMENTS FOR: ISSUANCE OF G.O. DEBT FOR: STATE	LOCALS	INTEREST RATE CEILINGS
MISSISSIPPI	1 1/2 times the sum of all revenue collected in any of the last for years	10% of assessed valuation with provisions to go to 15% in some cases	No	Petition of 10% of voters or 1500, whichever is greater, is necessary to force referendum	11% for G.O. 13% for revenue
MISSOURI	\$1,000,000 without voter approval	5% of assessed valuation	Yes must receive 2/3 approval	Yes must receive 2/3 approval	None
MONTANA	No limit, requires 3/4 majority in both state houses	Cities & towns - 28% of taxable valuation, counties - 11% additional % for water & power	used in some cases	Yes	None
NEBRASKA	\$100,000 limit	no limits	N/A	yes	yes, various statutory rates
NEVADA	\$200 million	10% of assessed property valuation for any debt	yes	yes	no
NEW HAMPSHIRE	No limit	Based on equalized assessments of values, up to 7% for cities and towns	No	No	None
NEW JERSEY	1% of appropriations	Cities - 3 1/2% of equalized valuation Counties - 2%	Yes	Require reading period	None
NEW MEXICO	\$200,000, but voters can approve up to 1% of state's assessed property valuation	4% of assessed valuation but no limit on water and sewer debt	Yes	Yes, for all purposes	10%, but can be waived by the Board of Finance

Table V-4 Cont'd.

	MAGNITUDE OF STATE GENERAL OBLIGATION DEBT ALLOWED	STATE LIMITATIONS ON DEBT OF LOCAL GOVERNMENTS	STATE REFERENDUM REQUIREMENTS FOR: ISSUANCE OF G.O. DEBT FOR: STATE LOCALS	INTEREST RATE CEILINGS
NORTH CAROLINA	No limit	8% of assessed valuation for all political subdivisions	Yes All gov'ts are under 2/3 Net Debt Rule can authorize up to 2/3 of the principal retired in the previous year without a referendum. 10% of voters can petition for referendum for any issuance	None
NORTH DAKOTA	Statutory \$10 million maximum	Cities and Counties limited to 5% of assessed valuation	No	None
OHIO	Only highway G.O. debt	Yes, based on purposes and assessed valuation	Yes	State-none Local - based on project purposes allowed
OKLAHOMA	Requires Constitutional Amendments for any debt	5-10% of assessed valuation, no limit on G.O. debt for public utilities, can be overridden by "absolute need determination" with 3/5 vote	Yes	10% for G.O., 14% for Public Trusts which issue revenue- backed debt according to legal charter
OREGON	Requires Constitutional Amendments, these set out limits according to purposes (total is 15% of State's True Cash Value)	Cities-3% of true cash value Counties-2% of true cash value, Water for population over 300 - 10%	Yes	State-13%, State Treasurer can approve 14% (Locals-none)
PENNSYLVANIA	No limit	No limit	Yes	None
RHODE ISLAND	Only \$50,000 without voter approval	Maximum aggregate Debt is 3% of assessed valuation, Director of Administration can approve debt over this amount upon appeal	Yes	None

Table V-4 Cont'd.

	MAGNITUDE OF STATE GENERAL OBLIGATION DEBT ALLOWED	STATE LIMITATIONS ON DEBT OF LOCAL GOVERNMENTS	STATE REFERENDUM REQUIREMENTS FOR: ISSUANCE OF G.O. DEBT FOR:		INTEREST RATE CEILINGS
			STATE	LOCALS	
SOUTH CAROLINA	5% of prior year's revenues	Debt is not to exceed 8% of the assessed valuation of taxable property unless put to a referendum	No	Yes, if debt is to exceed 8%	7%, Budget and Control Board can approve a higher rate if if reasonable
SOUTH DAKOTA	\$100,000	None	N/A	Yes	None
TENNESSEE	Must allow for 150% revenue for all debt outstanding	No regulation of long term debt, Aid from Division of of Local Finance	No	Must publish intentions and give 2-3 week comment period, voters can challenge in court	Some individual limits are written into authorization
TEXAS	5 agencies have Constitutional authority to issue G.O. debt, Amendments are required each year	Counties-\$0.6/\$100 valuation cities-\$1.5/ \$100 valuation Home-Rule cities - \$2.5/\$100 valuation Water Districts-unrestricted	Yes	Yes, various requirements	15%
UTAH	1-1/2% of reasonable fair cash value of the state's assessed property valuation	4% general purpose + 4% for water, sewer, lighting of assessed net valuation of property	No	Yes, in all G.O., some- times on revenue	None
VERMONT	Legislature can only issue bonded debt for 90% of what was paid off in the previous year	10% of their assessed valuation but there are many exclusions includ- ing water and sewer	No	Yes, min. approval ratio, a petition can force another vote	None
VIRGINIA	3 types of full faith & credit debt; generally new debt must be put to referendum (98) unless the debt is backed by revenues (9C) or is needed to meet an emergency (9A)	Some regulation by State Commission on Local Debt	on 9B	Yes	None

Table V-4 Cont'd.

	MAGNITUDE OF STATE GENERAL OBLIGATION DEBT ALLOWED	STATE LIMITATIONS ON DEBT OF LOCAL GOVERNMENTS	STATE REFERENDUM REQUIREMENTS FOR: ISSUANCE OF G.O. DEBT FOR:		INTEREST RATE CEILINGS
			STATE	LOCALS	
WASHINGTON	Constitution - 9% of average General Fund revenues over past 3 years. Statutory - 7% (same) statutory limit can be overcome more readily	No	Yes	No	None
WEST VIRGINIA	Constitution prohibits	No	N/A	Yes	Yes, varies for authorized purpose, written into Amendment
WISCONSIN	Percentage of assessed property valuation, \$100,000 on casual deficits	5% of assessed valuation plus many procedural requirements	No	Some are mandatory, small % of voters can force referendum	None
WYOMING	up to 1% of state's assessed property valuation, there is no outstanding G.O. debt	4% of assessed valuation +4% for sewer projects, no limit for water purposes	Yes	Yes	No

Source: Interviews with state treasury department officials.

share in one fiscal year. An escrow account, or state savings account, may be necessary to save for the non-Federal share of a water project. Future appropriations to this account would not be mandatory, however, because often future legislatures must be unencumbered. (The proposed water legislation states that the Corps can enter into an enforceable contract with non-Federal sponsors without encumbering future legislatures.) Another option would be to try a revenue bond approach at the state level. Revenue-supported debt is usually exempt from state constitutional prohibitions.

Twenty-two states require a statewide referendum for any issuance of general obligation debt. Of these, about nine states allow debt above constitutional limitations if approved by the voters. As of 1983, there were only eight states that had no general obligation debt outstanding (Bureau of the Census, 1984). Many states bypass referendum or other requirements for debt issuance by establishing special authorities. These authorities are empowered to issue bonds to finance certain types of projects. They are limited to the issuance of revenue-supported debt that is ordinarily not backed by the full faith and credit of the state. They do, however, carry the state's express or implicit moral obligation and are limited by the specific statutory authority.

Constitutional prohibitions on state issuance of general obligation debt have the effect of shifting debt responsibility to local governments. Local governments in states with prohibitions against state general obligation debt issued 22.4 percent more debt than local governments in states without this constitutional restriction (Smith, 1985). The indirect effect of this policy puts the financial responsibility for capital expenditures at the lowest level and should theoretically promote better project selection and management.

In the water area, three general kinds of authorities have been established that states use to finance water on a revenue-supported basis. The first kind of general authority is statewide. An example is the Oklahoma Water Resources Board which is authorized to issue revenue bonds and to lend the proceeds to communities that otherwise couldn't borrow it on their own. Several states have similar revolving loan programs and five states have bond banks that act as financial intermediaries in raising funds. A second kind of general authority are substate regional organizations that oversee hydrologic basins and are exemplified by the Conservancy Districts in Ohio or the River Authorities in Texas. These organizations are equipped to plan and construct projects on their own, sponsor Federal projects, and finance water-related

investments within their respective jurisdictions. The third and most common substate entity created to finance water investments are the smaller special districts, e.g. Flood Control Districts, Drainage Districts, etc. These are created locally through powers granted by the state and have various revenue raising capabilities, but do not usually have any permanent professional expertise.

Since general obligation capability is reduced by limiting the taxing powers of the government, the incidence of special districts or authorities can be expected to increase with tax limitation acts (more on tax limitations below). With the increase in special authorities, the use of revenue-based user financing increases. This type of financing has advantages for financing some water projects in a time of scarce resources and competing demands. Not the least of these advantages is that a state's or community's general obligation capability can be saved for public projects where beneficiaries are harder to identify. A primary disadvantage of paying off debt from water use charges is that these fees cannot be deducted in the form of state and local taxes from one's Federal income tax. Therefore, tax-based financing (G.O. bonds) can be less expensive solely for this reason. (The most widely-held belief is that G.O. bonds have lower interest rates because governments pose a smaller risk to the investor than do the

revenues produced by the proposed project.) Presently, the movement toward the use of revenue financing because of tax limitations has slowed because this type of legislation, popular in the late 1970s and early 1980s, seems to have lost momentum. In 1984, several Proposition 13-type of referendums were defeated around the country.

The costs of financing include 1) underwriting fees, which vary according to the issue size, 2) the bond quality, 3) the number of underwriters bidding, and 4) whether the bond is a general obligation or revenue instrument. Of these factors, the quality of the debt is the primary determinant of the cost of capital. Determining quality, however, is more expensive for revenue issues because the analysis of the economic viability of the project is usually more intensive than the general creditworthiness of the government. However, Smith (1985) argues that the cost of using general obligation bonds is not necessarily less expensive than revenue bonds. (Smith's work is another good reference for policymakers that are unfamiliar with tax-exempt bond financing. It also makes the case for user financing and a market/technical assistance approach to state involvement in local financing.) Individual circumstances help determine whether general obligation is cheaper than revenue-supported debt. Some water utilities have such good credit histories that their ratings and borrowing rates can be as good as those of the best

government. In addition, the cost of revenue bonds can be lowered, sometimes dramatically, by simply increasing the number of bidders.

As mentioned earlier, the proposition that revenue bonds can be as inexpensive as general obligation bonds is generally not agreed upon by public financial managers. A state policy such as North Carolina's makes choosing between the two types of instruments a moot question. The State has a policy of using general obligation debt whenever possible because of the generally lower interest rates. Since all the North Carolina local governments must be independently audited each year, the resulting financial soundness is taken advantage of to issue low-cost G.O. debt. (N.C. has the highest number of AAA rated governments.) However, the decision is often made to repay G.O. debt from project revenues if there is a marketable product like water supply.

Column 2 of Table V-4 displays some of the states' debt limitations placed on its local units of government. Only ten states have no restrictions on the debt of its localities. Column 3 shows whether the state requires a referendum for general obligation debt at either the state or local level. Thirty-three states require that voters in their political subdivisions approve the community's debt. (Various town or city charters may have their own requirements.) Finally, interest rate ceilings mandated by

the state are shown in Column 4. These ceilings caused quite a few problems in inflationary, high interest rate periods, but are not currently a major impediment to financing.

State-Imposed Tax Limitations

States often place restrictions on the taxing authority of their subunits of government. There are a great number of forms that these restrictions on various types of taxes take. Political subdivisions under different charters face various legal tax and assessment capabilities. All but five states place some kind of restriction on lower-level governments by limiting property tax rates and/or assessments. Table V-5 illustrates the types of limits are placed on counties(C), municipalities(M), and school districts(S) for all fifty states. Eighteen states have laws limiting what the state itself can levy in taxes. Eight of these are constitutional amendments which required very large majorities to enact. All but two of the eighteen were passed since the tax limitation movement reached its peak in 1978. The other two passed between 1970 and 1978.

Property tax limitations generally shift the responsibility for raising revenues from local to state governments. States that impose the strictest limitations on property taxes make more intergovernmental transfers of funds to local governments. However, most states exempt

Table V-5

Restrictions on State and Local Government Tax and Expenditure Powers (October 1984)

State Imposed Limits on Local Governments								
States	Overall Property Tax Rate Limit	Specific Property Tax Rate Limit	Property Tax Levy Limit	General Revenue Limit	General Expenditure Limit	Limits on Assessment Increases	Full Disclosure	Limits on State Governments
Total Number	12	31	21	6	6	7	13	18
Alabama	CMS***	CMS*						Const.***
Alaska	CMS**		CH**					Const.***
Arizona			CH***		CHS***	CHS***		Const.***
Arkansas		CMS*	CMS***1/		CHS***	CHS***		Const.***
California	CMS***							
Colorado		CS*	CH*		S**		CMS***	Stat.**
Connecticut								
Delaware		S*	C***1/					
Dist. of Col.								
Florida	CMS**	CMS*					CHS**	
Georgia								
Hawaii		S*						
Idaho		CMS*	CHS***				C**	Const.*** Stat.***
Illinois		CMS*					CHS***	
Indiana			CHS***					
Iowa		CH*				CHS***	CMS*	
Kansas		3/	CH**		S**			
Kentucky	CMS*	CMS***				CHS***		
Louisiana		CMS**	CMS***1/			CHS***		Stat.***
Maine								
Maryland				CH***		CH**	CH**	
Massachusetts			CHS***					Const.***
Michigan	CS*	M*	CHS***				CMS***	
Minnesota		S*	CHS**	M**	S**			
Mississippi		CMS*	CHS***	CMS***				
Missouri		CMS*		CMS***				Const.***
Montana		CMS*						Stat.***
Nebraska		CMS*		CHS***5/			CHS**	Stat.***
Nevada		S*	CH**					Stat.***
New Hampshire	CMS*							

Table V-5 Cont'd.

State Imposed Limits on Local Governments								
	Overall Property Tax Rate Limit	Specific Property Tax Rate Limit	Property Tax Levy Limit C**	General Revenue Limit	General Expenditure Limit MS**	Limits on Assessment Increases CHS*** CM****2/	Full Disclosure	Limits on State Governments
States								
New Jersey	CHS*	CHS**	CHS***					
New Mexico		CHS*						
New York		CH**						
North Carolina			CHS***					
North Dakota								
Ohio	CHS*		CHS***1/					Stat.***
Oklahoma	CHS*	CHS*	CHS*			CHS***		Stat.**
Oregon								Stat.***
Pennsylvania		CHS**4/						Const.*** Const.***
Rhode Island			M					Stat.***
South Carolina		CHS*						Const.*** Const.***
South Dakota								Stat.***
Tennessee		CHS**					CHS*** CHS***	Stat.***
Texas		CHS*						
Utah								
Vermont								
Virginia							CH**	Stat.***
Washington	CHS**	CHS**	CHS**	S**				
West Virginia	CHS*	CHS*						
Wisconsin		CHS*						
Wyoming		CHS*						
C-County	M-Municipal	S-School District		**-Enacted before 1970	**1970 to 1977		***-1978 and after	
Const.-Constitutional								

***-1978 and after

**-1970 to 1977

*-Enacted before 1970

See notes on next page.

1/ Limits follow reassessment. 2/ Applicable to only New York City and Nassau County. 3/ Only for selected districts (Fire, Library, Cemetery, etc.) 4/ Jurisdictions with home rule charters are not subject to limits. 5/ Expires December 31, 1984.

Source: ACIR, Significant Features of Fiscal Federalism, 1984

Table V-5 (Con't)

Restrictions on State and Local Government Tax
and Expenditure Powers (October 1984)
(Continued)

Explanation of Column Headings

Overall Property Tax Rate Limit: refers to the maximum rate that may be applied against the assessed value of property without a vote of the local electorate. The rate is usually expressed as millions per dollar of assessed value. The overall limit refers to the aggregate tax rate of all local governments-municipal, county, school districts, and special districts (if applicable).

Specific Property Tax Rate Limit: same as above, except the specific rate limit refers to limits on individual types of local governments (i.e., separate limits for cities, counties, etc.) or limits on narrowly defined services (excluding debt).

Property Tax Levy Limit: refers to the maximum revenue that a jurisdiction can raise from the property tax. This is typically enacted as an allowed annual percentage increase in the property tax levy.

General Revenue Limit: refers to the total amount of revenue, both from property and nonproperty tax sources, that a local government is allowed to collect during a fiscal year.

General Expenditure Limit: refers to the maximum amount that a jurisdiction can either appropriate or spend during a fiscal year. This is usually legislated as an allowed annual percentage increase in operating expenses.

Limits on Assessment Increases: by limiting increases in assessments, taxpayers are protected from escalating tax bills caused by appreciating property values. This forces local governments to increase tax rates for needed additional revenue, rather than rely on this automatic revenue windfall caused by rising property values.

Full Disclosure or Truth-in-Property Taxation: refers to a procedure designed to promote public discussion and political accountability requiring local governing bodies to advertise and hold public hearings on proposed tax rate increases.

from these tax limitations funds raised to retire the principal and interest payments on general obligation debt. Therefore, these restrictions don't always directly affect the financing of water projects (obviously revenue-supported debt doesn't affect taxing capacity either) but contribute to the incentive to finance projects from general revenues rather than from user charges. There is also an indirect cost associated with higher transfers from the state due to local tax limitations. Financing costs will increase because the municipal bond market perceives intergovernmental transfers as being risky. Revenues that are subject to outside political forces - out of the direct control of the bond issuer - are of lower 'quality'.

One reason tax limitations are relevant to Corps planners is for possible beneficiary financing of flood control projects. For example, one of the first tasks in a reconnaissance study for a flood control project should be to find out the capacity of potential project sponsors to raise revenues from increased property taxes. (Increased property taxation may not be a perfect "user fee" but may be the only or easiest way to raise local funds since it is the primary revenue source of local governments. Special assessments better identify beneficiaries, but are obviously much harder to implement.) If raising more revenue from property taxes is currently illegal, other financing arrangements - such as

state funding, special districts, or unassociated tax revenues - must be found or the law (tax limitation) must be changed. This could very well be a decision point for continuing any study efforts.

State Assistance to Local Governments

Some of the most important ways that states aid local governments in financing public works investments are 1) by revenue sharing and grant programs, 2) by giving localities more flexibility to raise local revenues, 3) by allowing creation of capital improvement districts or authorities, and 4) by assisting with local debt financing. The issuance of long term tax-exempt bonds, which require repayment of the debt over the useful life of the investment rather than from current revenues and users, enables cost recovery to more closely match the accrual of benefits over time.

Revenue sharing and grant programs are popular and can accomplish equity goals as established by political criteria. If the purpose is deemed an overriding public health or safety concern, this approach may make the most sense. On the negative side, it has the disadvantage of reducing the incentive of the recipient to hold down the project cost. Overbuilding occurs when the incremental benefits are less than the incremental costs to state and local governments. Another negative consequence of these programs is the effect they can have on the subdivision's

credit rating. Dependence on other governments for funding increases risk from the bond buyer's standpoint, thus contributing to higher interest costs.

According to the National Conference of State Legislatures (NCSL, 1982), states can assist local governments in debt management (number four above) by doing some or all of the following: reducing interest payments; reducing underwriting and marketing costs; providing access to debt financing for new or infrequent borrowers; or improving technical skills in debt management. While trying to achieve these objectives and the reduced risk of default, states may also want to prevent large (or any) subsidies, prevent adding undue administrative costs, and prevent harming the state's own credit rating. The NCSL (1982) has classified state assistance programs into five major categories. The categories are 1) Supervision and Technical Assistance, 2) Financial Intermediation, 3) Grants for Debt Service, 4) Guarantee of Local Debt, and 5) Creative Financing.

(1) Supervision and Technical Assistance. Many states supervise local debt management by collecting and disseminating data, prescribing contents of official statements, or reviewing local bond issues. These activities do add to local administrative costs and can restrict local freedom. But state supervision also improves the state-wide credit market (for all governments) by reducing the risk of a default.

Many states also provide technical assistance to their local governments. States provide data to bond issuers, publish manuals, or conduct seminars. These activities enhance the technical skills of local officials and facilitate responsible debt management (NCSL, 1982).

States have been involved in local debt management for a long time. Some of the most extensive programs were initiated during the 1930s when many cities felt the effects of the Depression and approached default. Interest in these efforts has peaked again in the last few years as cities have undergone financial stresses and with the tremendously increased use of tax-exempt bond financing.

Three major trends have been observed in the growth of the municipal bond market. The first trend has been the increase in special districts and statutory financing authorities. Second, has been the increased use of revenue bonds in lieu of general obligation bonds; and third, has seen the increased use of tax-exempt bonds for private sector activities. These 'private activity' bonds include Industrial Development Bonds (IDBs), pollution control bonds, and housing mortgage bonds. They accounted for 47% of all tax-exempt bonds issued in 1980 (Smith, 1985). Bonds for water and sewer purposes amounted to about 10% of the total in the same year. These 'traditional' purpose bonds are generally better received by the market than the newer entrants and enjoy lower costs.

During the high interest rate period of the late 1970s and early 1980s, state assistance to local governments in dealing with volatile financial markets grew. Investors

demanded more financial disclosure, greater security, and a shifting of some of the risks from the investor back to the issuer [See Digest of Proceedings (ICWP/IWR, 1985) for discussion of 'creative financing' techniques]. This presents the greatest problems for small communities that are inexperienced in dealing with the private sector in financing. Smaller communities face higher interest rates because of their short or non-existent credit histories. They also must contend with higher underwriting and marketing costs. For these reasons, the small communities have been the focus of state policies in financing assistance.

North Carolina and New Jersey have the two most extensive assistance, oversight and financial management regulatory programs in the country. [See Digest of Proceedings (ICWP/IWR, 1985) for discussion of North Carolina's program.] These programs place a compliance burden on local governments but can result in lower financing costs because they provide the financial community with the information they seek. The lower quality of information generally provided by governments contributes to interest rates that are higher than would be expected based on rates given equally-rated corporate bonds, after consideration of their tax-exempt status. Ratings, however, provide only a partial assessment of a bond's quality.

Analysts are much more interested simply in the security of repayment. The investment community has ranked a government's bond rating 19th out of 21 factors they consider when assessing risk (Smith, 1985).

(2) Financial Intermediation. This term refers to a state agency or authority that issues debt and loans the proceeds to local governments. (The intermediation is between the local government and the credit market.) Financial intermediaries reduce the borrowing costs of local governments (because of the states' better credit ratings), provide access to the credit market for new or infrequent issuers, and reduce underwriting and marketing costs. State subsidy is minimal.

(This category also includes) state loan programs funded from current revenues. These share many of the features of true financial intermediaries except they are not funded solely by state bond issues. These programs require some state subsidy (NCSL, 1982).

Five states (Alaska, Maine, North Dakota, New Hampshire, Vermont) operate bond banks that provide a voluntary service to issuers of local debt. There is only an implicit state guarantee of these obligations. North Dakota's bonds are the only ones backed by the full faith and credit of the state. However, the markets perceive state vulnerability as the state's own credit rating may be reduced because of large issuance of state bonds for local purposes. The establishment of bond banks is often opposed by the financial services industry who fear reduced demand for their services. The NCSL (1982) says that:

The Maine Bond Bank is a good example of how bond banks operate. The bank was established by the state legislature in 1972. It operates at no cost to the state; all expenses are paid by participating municipalities.

The bank sells bonds in issues of \$6 million or more and uses the proceeds to purchase an aggregation of smaller, general obligation bonds issued by municipalities. This procedure reduces the costs of bond underwriting and marketing, and significantly lowers the interest payments.

The bonds sold by the bank are secured by a reserve fund, by the full faith and credit of municipalities, a lien on state grants-in-aid, and as a last resort, the state's moral obligation. The bonds are not secured by the state's full faith and credit. And the bank can exclude local issues that could detract from the marketability of the bank's bonds.

Participation by the municipalities is voluntary. Local governments wishing to sell bonds to the bond bank must first receive the unusual electoral approval (if necessary). They then provide the bank with the financial information usually requested by credit rating agencies. After the bank buys the bonds, the municipalities' interest rates are equivalent to those obtained by the bank itself (NCSL, 1982).

Economies of scale are achieved in bond banking through pooling issues which reduces costs for underwriting, financial advice, bond notice, bond prospectus, bond printing and rating. Costs that remain unchanged are those for special elections, local attorneys fees, and outside bond counsel. Katzman has found that a bond bank reduces the localities interest rate by 38 basis points (NCSL, 1982). Bond banks are most valuable in states where there are many small, poorly rated, or infrequent issuers. They are most advantageous where there are significant differences between state and local credit ratings.

A very critical view of bond banks, however, is given by Smith (1985):

By pledging - explicitly or implicitly - the taxing power of the state, bond banks transfer financing risk from local to state governments. This reduces financing costs of local governments. But it increases the financing costs of state governments, because they do not have unlimited financial capacity to assume the financial risks of local governmental investment.

Private investors apparently view bond banks as ultimately the responsibility of state governments, notwithstanding any language to the contrary in the enabling legislation. State funds are involved, either directly or indirectly, via an implicit form of state "equity participation" (Forbes, Fischer, and Peterson, 1981, p. 163). State legislators are authorized if not required to bail out a municipality that cannot meet its bond bank obligations. In 1972, municipalities in Vermont were experiencing finance problems that threatened their ability to meet their required debt-service payments to the Vermont Bond Bank. Both the state of Vermont and bond bank suffered reduced rating, due to the anticipation that the state would absorb the financial responsibility for its municipalities (Twentieth Century Fund 1974, p. 136). Vermont's statutory option to bail out was viewed to be the same as political responsibility to bail out.

Bond banks also redistribute financing costs among municipalities. Normally, bond banks receive a rating one category below the state government's general obligation bonds. All municipal bonds are treated the same, regardless of their individual financial strength. Lower-quality bonds enjoy lower financing costs and higher-quality bonds suffer higher financing costs because the bank "averages" high- with low-quality bonds. It is estimated that this commingling of municipal bonds raised the interest costs of AA-rated, larger issues by 140 basis points (almost 1.5 percentage points). A medium-sized issue, \$5-million, A-rated bond suffers increased financing costs of 43 basis points. Only BAA-1-rated bonds enjoy reduced financing costs, ranging from savings of 56 basis points for a \$1-million issue and disappearing for bond issues larger than \$9 million.

This cross-subsidization occurs because bond banks are not a true means of risk diversification. Diversification occurs when a portfolio is constructed without the relative values of the constituent bonds being destroyed. Private investors can diversify risk by constructing their own portfolio of bonds.

Bond banks fail to diversify risk in an efficient manner because they require a municipality whose cost of capital is 10 percent to receive the same interest rate as another whose cost of capital is 12 percent. This "equal treatment of financial unequals" confuses cross-subsidization with the objective of risk diversification. By not allowing the market to separately price bonds with differing intrinsic values, bond banks are an economically higher-cost means of risk diversification (Smith, 1985).

Some states operate revolving loan programs (similar to infrastructure bank proposals) for specific purposes such as water development or sewer facilities. For water supply, the Western state programs have emphasized the building of new water supplies. In the East, they are usually directed toward the rehabilitation of existing distribution systems. Smith takes a somewhat less dim view of these programs but maintains that they still increase financing costs.

(Just)As a bond bank, an infrastructure bank would redistribute financing costs among municipalities and between state and local governments. State governmental financial responsibility will be more transparent than in the case of bond banks. The state's contribution of up-front capital is an explicit financial responsibility in contrast to the implicit one in the state's role as a source of backing of bond banks (Smith, 1985).

Generally any loan-repayment requirements provide municipalities with greater incentives to economize on project resources than grants-in-aid programs. Smaller-scale projects -- better directed toward provision of public services -- are more likely to be presented to the infrastructure bank than they are to an agency administering outright grants (Smith, 1985).

(3) Grants for Debt Service Several states earmark their state aid payments for local debt service. The state aid may be sent to the locality or directly to the bond holder. This procedure reduces the investor's perceived risk, and thus lowers the localities' interest payments.

Seven states (Connecticut, Illinois, Maine, Maryland, Massachusetts, New Jersey, and Utah) earmark grants specifically for local debt service, usually for school construction (NCSL, 1982).

These programs work only if they are perceived as being permanent by investors. New Jersey's Qualified Bond Program is an example of a program that has been particularly successful.

(The Program) has improved local credit ratings by combining stricter state regulation of local financial management with direct payment of local aid to bond holders. Local participation is voluntary, but does include a large measure of state oversight. Applications for local bond issues are reviewed by the Local Finance Board (of the Division of Local Government Services). Under guidelines established by the legislature, the board investigates the reasonableness of amount, the need for facilities, and whether the issue would impair the credit rating of the city or impair the city's ability to provide services. The Board has the ultimate power of approval.

In one case, Newark agreed to raise its water rates by 50 percent to receive the Board's approval for a water system bond issue.

All localities agree to provide statements of revenues and expenditures on a monthly basis. In turn, the state certifies the bond as a "qualified bond". The bond is treated as a local general obligation bond with no state obligations. But the state reinforces the credit-worthiness of the issue by dedicating State Urban Aid and aid from the Property Tax Replacement Program to the bond holders for payment of the debt service. Localities agree to replace these lost funds from local revenues (NCSL, 1982).

This program also makes sense only where states have credit ratings that are much higher than many of its cities. Existing state aid programs to cities are needed as a conduit for these funds so that they can be tied to debt service requirements. The major disadvantage is a decline in local autonomy. For this reason, the programs must be made voluntary.

(4) Guarantee of Local Debt A few states (4, Massachusetts, Michigan, Minnesota, and New Hampshire) promise to supplement or replace local resources as may be required to meet debt service payments (for limited purposes). These programs may lower perceived risks (and reduce interest payments), but can also weaken state credit ratings and require a state subsidy (NCSL, 1982).

A better alternative may be the use of private bond insurance, a growing business. In 1982, 10 percent of total new municipal financing was insured (NCSL, 1982). The growth of this market has been rapid since New York City's problems in the mid-seventies. If an offering has been insured, it automatically receives a AAA rating from the rating agencies (Standard and Poors and Moody's). Studies have shown bond insurance to be very cost effective especially for the smaller, lower-rated municipalities. To determine whether one should purchase insurance is simply a matter of requesting bids from underwriters for an offering with and without insurance. If the difference in the two rates is greater than the cost of the premiums, then insurance is cost-effective. State governments can help in

this process by implementing procedures outlining the procedure of how investment bankers are to submit bids (Smith, 1985).

(5) Creative Financing. Several states and localities are experimenting with creative financing techniques to lower their borrowing costs. These include zero-coupon bonds, sale-leaseback financing, and other techniques suited to the complexities and investor demands of (the) credit market. States can enact legislation to enable their localities to utilize these new instruments, and provide technical assistance to ensure proper use (NCSL, 1982).

Most of these methods are dependent on provisions of the tax code. The future of various tax expenditures is uncertain as there is always speculation about actions to curb their use. Major tax reform legislation now before Congress would sharply curtail many creative financing techniques. States can help local governments take advantage of the methods by providing technical assistance and in the dissemination of information. The interest in these techniques rises in periods of high inflation and market uncertainty.

CONCLUSIONS AND POLICY OPTIONS

The new intergovernmental relations in the U.S. Army Corps of Engineers Civil Works program will be driven by changes in financing policy. One of the distinguishing characteristics of intergovernmental relations as a field is that they are often enmeshed in policy questions concerning financing. With the initiation of higher project sponsor cost sharing and upfront financing, the understanding upon which the national water resources program is founded shifts. The term "new partnership" has been used by the Corps leadership to describe this shift.

Although its meaning is not yet clear to those familiar with the program, the term signifies a different process and way of understanding the roles of the Corps of Engineers and the project sponsors.

The overlapping-authority model of intergovernmental relations that best describes the U.S. system is characterized by interdependence and bargaining among the three levels of government officials. Within the overlapping authority to manage water resources, the Civil Works program has been distinguished largely by national-local cooperation. The implementation of cost sharing increases gives the states a larger decisionmaking

role, broadening the program to reflect a higher degree of national-state-local cooperation generally, and in many cases may substitute a simple national-state coalition. When differences arise between state priorities and local priorities over project outputs and features, the cumulative impact increases the influence of the state at the expense of local preferences.

State Institutions, Constraints, and Programs*

The technical capability of states in water resources planning and engineering is extremely diverse. Only eighteen states have water plans that make project specific recommendations (with five more major plans currently underway). Many states have relied solely on the various programs of the four major Federal water development agencies for these services.

Although the trend will probably be toward hiring more state-level water professionals after cost shared planning is institutionalized, states will not have to build up complementary programs and technical staff unless they so choose. Many states will find it less expensive to simply pay cash for their planning share than to hire permanent staff for the irregular provision of in-kind planning

*This section provides an overview of state fiscal policies and water resources capabilities. Financing issues are discussed, but policy options are reserved for the Corps Civil Works Program.

services. Other states may use consultants extensively, applying the cost of their services to the in-kind planning allowance. In short, most states will supply as much direct input to the process as feasible to ensure maximum influence in project development planning.

There will be more than one decision point in the planning sequence, including the reconnaissance study, at which a determination of the sponsor's ability to finance proposed alternatives must be made. To make these determinations more manageable, early contact should be made with officials from the state treasury and from private sector financing specialists.

Although officials from the Corps of Engineers and state water resources agencies know each other and work together often on various projects, the Corps has generally not had close relations with the state's financial officials. Establishing ties with these specialists is important because they can inform project planners of the state's unique approach to its own fiscal affairs and of the requirements it places on its political subdivisions. These financing constraints on potential project sponsors may alter dramatically what approach is taken to solve the water problem, and indeed, may be the factor that compels the state to become the official project sponsor.

Chapter V summarizes a multitude of state financing constraints such as balanced budget requirements, balancing procedures, and tax limitations. Table V-4 displays a fifty-state survey taken for this study that shows the magnitude of state general obligation (G.O.) debt allowed, the state's limitations on the debt of local governments, state referendum requirements for the issuance of state and local G.O. debt, and any state imposed interest rate ceilings. States make use of G.O. financing to varying degrees. Only eight states had zero outstanding G.O. debt as of 1983 while only four states were found to have no legal limitations at all on the state's issuance of G.O. debt. One common type of restriction is a debt ceiling which has been found to impose real limits on state debt capabilities in sixteen states; other ceilings are high enough to pose little or no practical constraint or can be overridden with voter approval. Twenty-two states require a statewide referendum for any issuance of G.O. debt. Voter approval, however, is considered to be one of the most stringent forms of debt limitation. Outcomes of referendum are often difficult to predict and in some states may simply be considered unattainable.

The fiscal policy decisions made by states have some direct, and some subtle, effects on local government efforts to invest in their public facilities. For instance, a

direct effect of limiting the taxing powers of local governments is an increase in the use of special districts and authorities. Although sometimes provisions are made to exclude from tax limitations those taxes raised to pay off debt, or for water-related purposes, the net effect is to increase the incentive for communities to pay for vendible project purposes through user fees or rates (using revenue bonds instead of G.O. bonds). One positive result of this public policy is that the community's G.O. debt capacity can be freed to finance other public purposes where users are harder to identify, i.e. flood control. Second, it should provide the proper incentives to invest in projects that make the most economic sense for the community. However, user fees are not tax deductible as are state and local taxes, which add to their expense from the point of view of the local decisionmaker.

Revenue-based financing is also considered more expensive by most state financing officials. Rates are higher because project risks are harder to determine than local government taxing capacity. The danger of tax limitations, however, might prove to be the imposition of an insurmountable hurdle to financing projects where users or beneficiaries are hard to identify.

A state policy with more subtle impacts is the prohibition or limitation on the use of state G.O. debt.

Limiting its issuance shifts more public works spending to local governments. (Local governments in states with prohibitions on state G.O. debt have 22.4% more debt than states without the restriction.) The benefits of this policy are manifest in lower local borrowing costs. It encourages economically sound projects, lessens dependence on intergovernmental payments, and thereby increases the financial soundness of local governments.

Chapter V also explains how several of the more popular state financial assistance programs work and gives some of the pros and cons of each kind of assistance. There are five primary ways that states assist local governments in their debt management. They are 1) Supervision and Technical Assistance, 2) Financial Intermediation, 3) Grants for Debt Service, 4) Guarantee of Local Debt, and 5) Creative Financing. Most of the programmatic steps taken by states have been aimed at the small community that either lacks resources or that has no experience with debt financing.

From a market standpoint, good public policy increases the credit strength of local governments, allowing them to proceed with investments that best suit their situation. Two of the above program categories, technical assistance and guarantees of local debt, would conceivably hold the most promise for lowering total government borrowing costs.

(Financial reporting requirements and managerial oversight from the state can also improve individual financing capabilities, and thus lower cost, but do not fit prevailing deregulatory instincts.) Many state water officials may find this approach naive in their 'real world' dealings. The problems they encounter in small and unsophisticated communities is likely to persuade them to lend support to a financial intermediation approach.

The Civil Works Program: Adapting to New Relationships

The nature of the Corps of Engineers authority will come to resemble more closely the private sector consulting engineer - the technical expert - and be exercised less as a decisionmaker . The project sponsor, likewise, becomes more like the engineer's client - seeking a set of alternatives upon which to base a well-informed decision. Obviously, the analogy is not perfect due to the Corps' accountability to protect the Federal interest, but is useful in understanding relationships in the "new partnership". Furthermore, cost-shared feasibility planning lends itself to close coordination that goes beyond the consultant-client model; but the higher the total non-Federal cost, the more the Corps should play the advisory role.

The new planning process will also be characterized by a higher degree of face-to-face contact between the project

sponsors (and/or its consultants), the state water resources officials, and the Corps. Non-Federal planning sponsors, because they are able to terminate the study by withdrawing their funds at any time, need review points scheduled often to ensure the timely flow of information. Therefore, planning will be characterized by a higher degree of iteration. More interesting than the mechanics, however, will be how compromises and negotiations will proceed. Whether bargaining behavior will occur is not in question, only whether it will occur informally on a personal basis, or formally in open council. Although there may be institutional biases and short term effectiveness in informal 'muddle through' arrangements, longer term gains in efficiencies, including good will, could be made in a structured forum similar to the Negotiated Investment Strategy (NIS) presented within.

One of the intentions of Congress in providing for higher sponsor cost sharing is to create a market test. Financial considerations, including a severe budget constraint in some situations, should lead to a better accommodation of project sponsor needs. However, the added constraint will also cause a reexamination of many environmental and safety standards that in the past have been considered inviolable. The 'acceptability' criteria of

the P&G will be the basis on which compromises in 'engineering standards' and environmental features are made.

Non-Federal planning officials will be frustrated in their dealings with the Corps if they feel they are dealing with persons who are not authorized to make lasting commitments. They need to report progress being made on the plan to their elected leaders without fear of being overruled later in the Corps review process. If everything that deviates from traditional norms must be approved by the Office of the Chief of Engineers (OCE) and the Assistant Secretary of the Army for Civil Works (ASA(CW)) there is likely to be an overload at the top not to mention the loss of credibility in the field. Consideration should be given by OCE and ASA(CW) to the adequacy of the current authority of District and Division Engineers to enter into agreements with confidence on plan formulation issues outside of traditional norms.

Policy Options and their Rationale

The following policy options are preceded by a review of issues and a rationale for potential actions when implementing new water resources legislation. The purpose of all the options is to help to institutionalize a "new partnership" and establish a framework for intergovernmental relations for the U.S. Army Corps of Engineers.

Rationale - Organizational Commitment

The types of immediate decisions that must be made by the Corps of Engineers, each taken separately, may not be dramatic or extremely controversial. However, their totality will put the substance into the "new partnership". The notion of a fundamental institutional shift toward greater influence by project sponsors, and states in particular, must be kept in the forefront when implementing policies are formulated. As a practical matter, the higher the non-Federal cost share, the more influence sponsors will expect in project formulation. In situations where the Federal cost is small relative to the sponsor, the Corps must increasingly play the role of consultant.

Policy Option 1 - A Leadership Paper. To alleviate any misunderstanding, apprehension, or confusion across the Civil Works organization as to what the "new partnership" means in practical terms, the Corps leadership should set the tone. The challenge is to successfully change established attitudes and concepts within the Corps in order to promote new intergovernmental relationships. To achieve this, a leadership paper delivered by the Director of Civil Works or the Chief of Engineers could be developed. This paper should describe a new cooperative framework under which Civil Works projects are initiated, formulated, and designed.

The seriousness of the commitment to work closely with project sponsors could be further enhanced by giving the speech at regional locations throughout the country and by inviting all state directors of water resources and any staff they choose to bring, including representatives from the governor's offices. This type of event has the potential to raise the level of morale within the affected organizations and to alleviate any fears state officials may have that the Corps will now simply seek local money without 'giving up' the requisite amount of control over the formulation and design of projects. The cost of such an effort would be minimal.

Rationale - Training Opportunities

Many state and local project sponsors do not fully understand the Corps' planning methods and procedures that lead to projects with the greatest national economic development benefits ('the NED plan'). Efforts could be made to help state and local sponsors better comprehend the constraints under which Federal project planning proceeds. However, even those non-Federal planners who fully understand Federal planning guidance are more concerned with regional economic development than NED.

Regional benefits will now be even more important to project sponsors because they are more readily captured and thus financed; a new issue for most potential projects.

(Financial analysis often differs from economic analysis on this very point.)

Along the same line, there are personnel development needs within the Corps. Attention should be given to the documentation of project beneficiaries. Turning these benefits into cash flows (cost recovery) is the first step for any subsequent financing scheme based on the 'user pay' principle. In sum, there is a need for water resource development partners to gain a better understanding of each others needs.

Policy Option 2 - Short Course in the Corps' Planning Guidance for Non-Federal Water Resource Planners. A course covering the basics of the Corps' planning guidance could be offered to state and local officials interested in how decisions are arrived at using national decisionmaking criteria. Because of the opportunity for state water planners to become directly involved in the cost-shared feasibility study, the demand for this type of course might be high, especially in states where there are several proposed projects, project reformulations, and studies. With a sound knowledge of the 'ideal' national project, a greater degree of understanding could be expected when arguments are being made regarding a project's 'acceptability' to the local sponsors. This course could also be given as a refresher to Corps planners, or more

importantly, to significant Corps personnel outside the traditional planning function. Joint Federal/non-Federal training sessions would serve the added purpose of helping promote the new partnership by giving Federal and state planning counterparts an opportunity to get to know each other better.

Policy Option 3 - Short Course in the Fundamentals of Public Finance and Financial Analysis. Training should be made available to Corps planners and engineers who are unfamiliar with financing considerations and analyses. There must be at least a rudimentary understanding of financing issues if one is to discuss project funding schedules or construction phasing alternatives intelligently with a sponsor who is financing part of the project through the bond market. These courses could be offered jointly with state water professionals. As a bonus, these forums would provide an excellent opportunity to bring in state treasury or local finance officials to explain the state's law and financing traditions.

Specific information regarding financing schedules and U.S. Government contracting and water development law would also be included.

Policy Option 3a - Course in Use of Microcomputer Financial Spreadsheets. The above course can be supplemented, or a different course offered, to cover the use of financial spreadsheet software on microcomputers.

Rationale - Negotiation within the New Partnership

Bargaining behavior is characteristic of all intergovernmental relations. The most contentious issues usually revolve around who is paying for what, when, and how. Uniform cost sharing percentages for the various project purposes alone will not relieve the Corps of having to bargain over the project features and design, over the plan of study, over the schedule of payments, over possible Federal long term financing, and over output (benefit) allocation in multipurpose developments. In circumstances similar to those envisioned for the Civil Works Program, governments have successfully employed mediated negotiations to reach binding agreements. The rationale for using mediation is that since compromises must be made, it is better public policy to do so in an organized, thorough, and documented manner. Over the long run, or in the course of a single project development, increased efficiency is possible and good will is promoted. The term 'partnership' cannot mean that conflicts will disappear, but that a framework for resolving differences is in place and the chance for misunderstanding lessened.

Negotiations held within a framework like the Negotiated Investment Strategy make use of professional mediation. An experienced mediator is the essential ingredient that can turn an existing ideal public involvement program into a partnership relationship.) A mediator's function is to assure that all parties are properly represented, that all relevant information is available, and that all the issues are well defined. The mediator also provides reasoning and helps to structure the debate.

Policy Option 4 - Contract for Mediation Services.

Mediation services could be contracted for from a variety of firms, individuals, and non-profit institutions. Some of these firms specialize in environmental disputes. Contracting for the service has the advantage of assuring affected parties that the impartiality of the mediators is unquestioned. If the service were put on a retainer basis, these institutions or individuals could develop expertise in water resource issues (although successful mediators do not need to be experts on the subject matter). The primary advantage of putting mediators on retainer is the flexibility it would provide. The demand for their services will not be constant - parties to many projects or studies will not have strong disagreements or issues complicated enough to warrant a mediator.

Some of the factors that will increase the need for mediation include a severe budget constraint faced by the sponsor; a low Federal cost share which lowers the effective Federal interest; i.e., a multipurpose reservoir with substantial water supply, hydroelectric power, and recreation benefits; the reformulation of authorized but as yet unfunded projects in light of new cost sharing; and environmentally controversial projects.

Contracting can provide an opportunity to experiment with mediation without making a substantial programmatic commitment. However, the usefulness of such an effort must be evaluated over a period long enough to make conclusive judgements. One or two initial successes or failures will not be adequate. The criteria by which the program will eventually be judged needs to be laid out from the beginning.

Policy Option 5 - Develop Mediation Skills Within the Corps. The alternative to contracting for mediation services is the development of an in-house capability. This could take advantage of the Corps' reputation in some quarters as an 'honest broker' among competing interests. Corps mediators could presumably take advantage of a more complete knowledge of water resource issues but, as mentioned above, this is not the most important qualification. An experimental unit could be established at OCE or the Board of Engineers for Rivers and Harbors (BERH)

to test the usefulness of the concept. If successful, mediation teams could be set up at the Division level.

The primary disadvantage of this system is that the mediators might be viewed as partial to the Corps' position. For example, the mediator cannot be a defender of any negotiable administrative rule, engineering standard, or project feature. The perception of impartiality may be somewhat improved by the fact that they are coming from outside the District area. A successful track record would be the best qualification.

Rationale - Consistency and Flexibility in Decisionmaking

Formal or informal negotiations during project formulation pose two conflicting objectives; to be responsive to non-Federal desires and to be consistent among projects. Since projects vary widely according to their physical environment and human setting, only consistency between projects in similar conditions should be maintained. Some of the current standards that make sense in a particular location, may not nationwide. Non-Federal sponsors have been noticeably sensitive to 'overbuilt' projects that give them 'unnecessary' or 'add-on' features, or more flood protection than they are requesting. Coming to terms with this type of grievance is one of the stated Congressional intents of the new cost sharing provisions.

If many traditional norms, standards, or regulations are negotiable, at what level in the chain of command should agreements be confirmed? If left substantially in the field - without common criteria upon which to base decisions - inconsistencies will result. On the other hand, if all negotiations must be approved from the top (to ensure consistency) the entire process will become more cumbersome and the credibility of District personnel might be sacrificed. To date, one of the major complaints about the Corps program has been the amount of time it takes for a project to be planned at the District level and then approved by the Division, OCE, BERH, and ASA(CW). Since more planning review is not a desirable outcome of new water resources law, technical and organizational traditions need substantial reassessment.

Policy Option 6 - Engineer's Review of Standards and Incorporation of Risk-Based Decisionmaking. A major review of the methods and standards that constrain the formulation of projects is needed. If there is no guidance as to what is negotiable under specified conditions, there will be a bottleneck at Headquarters as Districts line up for approval of individual plans (for reformulated projects and new feasibility studies). Reliance on rigid nationwide standards should be downgraded whenever possible to increase the flexibility available. The employment of risk-based

decisions, including potential downstream effects, needs to be institutionalized. A determination of new minimum allowable standards to supplement risk assessment procedures needs to be agreed upon by a broad consensus of engineers, state and Federal.

A blue ribbon commission could be appointed to review methods and standards that impose practical constraints to innovative water resources development. The makeup of this commission should reflect the "new partnership" by including state engineers and land planners, private consultants, and Corps personnel both from research and field operating activities. The findings of this commission could be used by the Director of Civil Works as the basis for instruction to field offices.

A secondary benefit of doing a complete review would be to refresh all parties concerned with water resource development on the justification for continuing reliance on any accepted norms. If the basis for a position is clearly founded in the law (Congressional intent), at least this fact would be well publicized. The review should also help prepare Corps officials to convince their non-Federal partners that a proposed project standard, feature, or design is in their own interest.

Policy Option 6a - Lower Levels of Protection for Land Use Controls. This suboption is an example of the kind of tradeoff that could be sanctioned in the above review.

Since local governments usually control the use of land within their jurisdictions, severely limiting development in the flood plain as a condition for building a lower level of flood protection, i.e. building 50-year protection rather than 100-year etc., may be a viable method of lowering the cost of flood protection structures in some cases. Case studies of instances where such methods have worked should be written up and widely distributed.

Policy Option 7 - Reevaluate Authority in Chain of Command for New Partnership Arrangement. The large backlog of authorized and approved projects that have been formulated under old policies will be reformulated in light of substantially higher non-Federal contributions; new feasibility studies are to be jointly planned and approved with their sponsors. The basis upon which these projects will be different depends to a large degree on decisions that could come out of a process like the one suggested in Option 6. If an understanding is not reached, then it is more likely that important decisions must regularly come from Washington, D.C. However, non-Federal partners should not feel like they are dealing with surrogates in the field. More levels of review might encourage states to go straight

to OCE or ASA(CW) or to their Congressional representative to avoid more "red tape." Such a scenario would sour the new partnership.

The authority given District and Division Commanders should be reevaluated so that they will be able to make commitments without fear of being overturned except in the most extreme circumstances. What this authority includes should be a by-product of Option 6.

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